MIDDLEBURY COLLEGE BULLETIN

Faculty, Curriculum, and Courses
1963-1964

A Supplement
to the
1963-1965 Catalogue Issue

MIDDLEBURY COLLEGE
Middlebury, Vermont • August, 1963

Calendar for 1963-1964

FIRST SEMESTER

1963

SEPTEMBER

12—Thursday, Freshman Week begins
15—Sunday, Freshman Convocation (10:45 a.m.) Mead Chapel
16—Monday, classes begin (8 a.m.)

OCTOBER

12—Saturday, Alumni Homecoming Day (College in Session)
19—Saturday, Parents' Weekend (College in Session)

NOVEMBER

2—Saturday, Norwich football game away (Classes end at 11 a.m. 8, 9 and 10 o'clock classes at usual hour, 11:00 classes at 4:00 p.m. on November 1)
27—Wednesday, Thanksgiving Recess (12 noon) begins

DECEMBER

2—Monday, Classes resumed (8:00 a.m.)
14—Saturday, (12 noon), Christmas Recess begins

1964

JANUARY

6—Monday, Classes resumed (8:00 a.m.)
18—Saturday, First Semester classes end
20—Monday, Final Examinations begin
29—Wednesday, Examinations end

SECOND SEMESTER

FEBRUARY

3—Monday, Second Semester classes begin (8:00 a.m.)
27—Thursday, (5 p.m.) Winter Carnival Recess begins

MARCH

2—Monday, classes resumed (8 a.m.)
28—Saturday, Spring Recess begins (12 noon).

APRIL

6—Monday, Classes resumed (8 a.m.)

MAY

23—Saturday, Classes end
25—Monday, Final Examinations begin

JUNE

3—Wednesday, Examinations end
6—Saturday, Class Day
7—Sunday, Baccalaureate
8—Monday, Commencement

1963-1964

SEPTEMBER

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AUGUST

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MIDDLEBURY COLLEGE BULLETIN

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The Bulletin is published by Middlebury College seven times a year, in January, February, March, April, May, August and October at the Publications Dept., Old Chapel 46, Middlebury College, Middlebury, Vermont. **Second Class postage paid at Middlebury, Vermont.**

Faculty

SAMUEL SOMMERVILLE STRATTON, A.B., DARTMOUTH; PH.D., HARVARD; LL.D.,D.C.L.
President, Emeritus, Sept. 1, 1963 (1943) — 118 South Main Street

JAMES ISBELL ARMSTRONG, A.B. AND PH.D., PRINCETON
President, and Professor of Classics (*Effective Sept. 1, 1963*) — 3 South Street

STEPHEN ALBERT FREEMAN, A.B. AND PH.D., HARVARD; LL.D, LITT.D., L.H.D.
Vice President and Professor of French, Emeritus, Sept. 1, 1963.
Director of the Language Schools (1925) — 24 South Street

JOHN GERALD BOWKER, B.S., TUFTS; ED.M., HARVARD; L.H.D.
Dean of the Faculty and
Baldwin Professor of Mathematics (1926) — 14 Adirondack View

KARL L. ANDERSON, B.S., MOUNT ALLISON; PH.D., HARVARD
George Adams Ellis Professor of Economics (1957) — 116 South Main Street

JOHN THAYER ANDREWS, A.B., AMHERST; M.A., HARVARD
Professor of Philosophy (1936) — 57 South Street

GEORGE WILBON BAHLKE, B.A., UNIV. OF CHICAGO AND SWARTHMORE; PH.D., YALE
Assistant Professor of English (1961) — 121 So. Main Street

BREWSTER BALDWIN, A.B., WILLIAMS; PH.D., COLUMBIA
Associate Professor of Geology (1958) — R.F.D. 1

DONALD HENRY BALLOU, A.B., YALE; PH.D., HARVARD
Professor of Mathematics (1942) — 27 Weybridge Street

HORACE PALMER BECK, A.B. AND PH.D., UNIV. OF PENN.
Associate Professor of American Literature (1956) — 10 Murdock Court

PETER BERNDT, A.B., MORAVIAN
Instructor in German (1963)

RONALD R. BIELLI, B.S., AND M.A., UNIV. OF VERMONT
Lecturer in Mathematics (1956) — 5 Storrs Avenue

LESLIE COLE BIGELOW, A.B. AND PH.D., HARVARD
Associate Professor of Philosophy (1952) — Chipman Heights

LESTER I. BOCKSTAHLER, A.B., M.S., INDIANA; PH.D., NORTHWESTERN
Visiting Professor of Physics (1963) — 6 Adirondack View

CLAUDE LOUIS BOURCIER, AGRÉGÉ DE L'UNIVERSITÉ, PARIS
Professor of French (1937); *Dean of the French Summer School* (1947) — 14 Adirondack View

FREDERICK BECHTEL BOWMAN, A.B., WOOSTER; PH.D., UNIV. OF SO. CALIF.
Associate Professor of Speech and Director of Debate (1952) — Stewart Hall

ROBERT B. BROWNE, B.A., M.A., YALE
Instructor in Music (1963) — Rochester, Vermont

LUDWIG BÜTTNER, PH.D., UNIV. OF MUNICH
Lecturer in German (1963) — 21 South Street

CAPTAIN RICHARD A. BURR, A.B., HARVARD
Assistant Professor of Military Science, R.O.T.C. Unit (1962) — R.D. 3, Middlebury

JOHN FRANCIS BUTLER, B.A., AMHERST; M.A. BROWN UNIV.
Lecturer in English (1961) — 120 South Main Street

DONALD ALLEN CAMPBELL, A.B., DARTMOUTH; PH.D., YALE
Assistant Professor of History and Director
of Teacher Training Program (1960) — Munger Street, R.D. 3

ALAN CARTER, MUS. D., UNIV. OF VERMONT
Professor of Music (1939) — 17 High Street

MRS. CATHERINE CENTENO, B.S. AND M.A., MIDDLEBURY
Lecturer in Spanish (1949) — 105 South Main Street

JAMES G. CHAPMAN, B.MUS. AND M.MUS., UNIV. OF MICHIGAN
Instructor in Music (1959) *On leave, 1963–64*

CHUNG-YING CHIH, B.S., NAT'L TSING HUA UNIV.; PH.D., UNIV. OF CALIF.
Associate Professor of Physics (1954) *On leave, 1963–64*

JOHN H. CLAGETT, B.S., U. S. NAVAL ACADEMY; PH.D., YALE
Associate Professor of English (1955) — Locust Lane

REGINALD LANSING COOK, B.A., M.A., LITT.D., MIDDLEBURY; B.A., OXFORD
Professor of American Literature (1929)
Director of the Bread Loaf School of English (1946) — Pulp Mill Bridge Road

JOHN V. CRAVEN, A.B., BOWDOIN; PH.D., SYRACUSE
Associate Professor of Economics (1956) — Gorham Lane

PAUL MARSDEN CUBETA, A.B., WILLIAMS; PH.D., YALE
Associate Professor of English (1952) *and*
Assistant Director of the Writers' Conference (1956) — 39 Seminary Street

ROBERT B. DICKSON, B.S., HAVERFORD; A.M., M.S., UNIV. OF PENN.
Assistant in Physics and Mathematics (1962) — Salisbury

JOHN XAVIER EVANS, A.B., HOLY CROSS; M.A., YALE
Instructor in English (1962) — Apt. 1, 7 Weybridge Street

ALBERT HUNTER EWELL, JR., A.B., HAVERFORD; PH.D., NEW YORK UNIV.
Associate Professor of Psychology (1952) — 28 Weybridge Street

MISCHA HARRY FAYER, A.B., UNIV. OF MINNESOTA; PH.D., COLUMBIA
Professor of Russian and Director of the Russian Summer School (1943) — Pulp Mill Bridge Road

WENDELL FORBES, A.B., MIDDLEBURY
Instructor in Physical Education for Men (1962) — 13½ College Street

ALBERTO GIL NOVALES, BACHILLERATO, MAESTRO NACIONAL, LICENCIADO EN DERECHO
Instructor in Spanish (1961) — Apt. 17, Battell Block

ABBOT S. GAUNT, A.B., AMHERST; PH.D., UNIV. OF KANSAS
Instructor in Biology (1963) — Hepburn Hall

ROBERT WILLARD GLEASON, A.B., MIDDLEBURY; PH.D., M.I.T.
Assistant Professor of Chemistry (1960) — 39½ North Pleasant Street

LADISLAS GONCZAROW, BREVET INDUSTRIEL, B.A., AND M.A., UNIV. OF MONTREAL
Lecturer in Russian (1962) — 86 Shannon Street

SAMUEL GUARNACCIA, A.B. AND M.A., MIDDLEBURY
Professor of Spanish (1940)
Dean of the Spanish Summer School (1947) — Seymour Street

RUDOLF K. HAERLE, JR., A.B., DARTMOUTH; M.A., UNIV. OF CHICAGO
Instructor in Sociology—Anthropology (1962) — 44 Shannon Street

GRANT HOPKINS HARNEST, A.B., KNOX; PH.D., UNIV. OF VIRGINIA
Professor of Chemistry (1943) — 125 South Main Street

WILLIAM HARRIS, A.B. AND PH.D., HARVARD
Associate Professor of Classics (1956) — Seymour Street

ARTHUR KELLY DAVID HEALY, A.B., PRINCETON; M.F.A., PRINCETON SCHOOL OF ARCHITECTURE
Professor of Fine Arts (1943) — R.D. 1, Middlebury

URSULA MARGARETE HEIBGES, A.B., CATHOLIC UNIV. OF AMERICA; M.A. COLUMBIA; PH.D., BRYN MAWR.
Instructor in the Classics (1961) — 3 Storrs Avenue

HAROLD BRADFORD HITCHCOCK, A.B., WILLIAMS; PH.D., HARVARD
Professor of Biology (1943) *On leave, 1963–64* — Locust Lane

CHARLES LEONARD HOAG, A.B., ALBION; PH.D., CLARK
Professor of History (1947) — Weybridge Street

JOHN ROWLAND ILLICK, A.B., SYRACUSE; PH.D., HARVARD
Professor of Geography (1946) — 1 Springside Road

JOHN JOSEPH KELLY, A.B. AND M.A., MIDDLEBURY
Professor of Physical Education for Men (1936) — 95 Main Street

BÄRBEL KLEIN, ABITUR
Assistant in German, and Directress of German Section of Allen Hall (1963) — Allen Hall

VISVALDIS VARNESIS KLIVE, A.B., WITTENBERG UNIV.; M.A., COLUMBIA; B.D., UNION THEOL. SEM.; PH.D., COLUMBIA
Instructor in Philosophy (1959) — Battell Block

LEE ALLAN LENDT, B.A., M.A., STATE UNIV. OF IOWA
Instructor in Political Science (1961) — Seminary Street

MARY ELIZABETH LICK, A.B., LAKE ERIE; M.S., SMITH
Associate Professor of Physical Education (1956) — 125 South Main Street

DAVID LITTLEFIELD, A.B., SPRING HILL; M.A., AND PH.D., YALE
Assistant Professor of English (1959) — 46 Shannon Street

ERKKI W. MACKEY, B.S., SPRINGFIELD COLLEGE
Assistant Professor of Physical Education for Men (1956) — 45 Seminary Street

LT. COL. RICHARD H. MAEDER, B.S., BOSTON UNIVERSITY
Professor of Military Science, R.O.T.C. Unit (1962) — 37 Chipman Park

VINCENT HERSCHEL MALMSTRÖM, A.B. AND PH.D., UNIV. OF MICHIGAN
Associate Professor of Geography (1958) — R.D. 3, Middlebury

EDWARD ALEXANDER MARTIN, A.B., PRINCETON; M.A., COLUMBIA
Instructor in English (1961) — 38 College Street

ROBERT D. MARTIN, A.B., M.A., HARVARD
Instructor in History (1963) — 6 Hillcrest Avenue

PILAR MARTINEZ, LICENCIATURA EN LETRAS, UNIV. OF MADRID
Instructor in Spanish (1962); *Directress of Spanish Section, Allen Hall* — Allen Hall

LOCKWOOD MERRIMAN, A.B., HARVARD; M.A., COLUMBIA
Associate Professor of English (1947) — 12 Hillcrest Road

GENEVIÈVE MÉZENNEC, BACCALAURÉAT, LICENCE D'ENSEIGNEMENT
Assistant in French (1963) — Le Château

JOSEPH J. MORRONE, JR., B.S., UNIV. OF MASS.
Assistant Professor of Physical Education for Men (1958) — 34½ No. Pleasant Street

WALTER ALLEN MOYER, JR., B.S., PHILA. COLL. PHARMACY; PH.D., UNIV. OF DELAWARE
Associate Professor of Chemistry (1951) — 9 Adirondack View

HOWARD McCOY MUNFORD, B.S., MIDDLEBURY; PH.D., HARVARD
Professor of American Literature (1941) *On leave, 1963–64* — 41 South Street

PAUL E. NELSON, A.B., AUGUSTANA; M.A., UNIV. OF CHICAGO
Instructor in Political Science (1963) — Apt. 2, 7 Weybridge Street

WALTER JOHN NELSON, B.S., MIDDLEBURY
Professor of Physical Education for Men (1932) — Pulp Mill Bridge Road

WERNER NEUSE, PH.D., UNIV. OF GIESSEN
Professor of German (1932) *and Director of the German Summer School* (1949)
Director of Studies, Graduate School in Germany, first semester, 1963–64 — 21 South Street

BERTHE O. NORMANO, GRAD., WOMEN'S UNIV. OF PETROGRAD
Lecturer in Russian (1960) — 3 Storrs Avenue

VICTOR LAWRENCE NUOVO, A.B., HOPE COLLEGE; B.D., NEW BRUNSWICK THEOLOGICAL SEMINARY
Instructor in Religion (1962) — Apt. 1, 105 South Main Street

NORMAN W. OFSLAGER, A.B., M.A., OHIO UNIV.; PH.D., CORNELL
Associate Professor of Sociology-Anthropology (1963)

ROBERT W. PARKER, A.B., MIDDLEBURY; M.A., COLUMBIA
Instructor in English (1960) — 135 South Main Street

MAJOR GEORGE H. PATRICK III, B.S., PENN. MILITARY COLLEGE
Assistant Professor of Military Science, R.O.T.C. Unit (1961) — Painter Hall

BRUCE BIGELOW PETERSON, A.B., MIDDLEBURY; PH.D., SYRACUSE
Instructor in Mathematics (1962) — 4 Storrs Avenue

EDWIN L. POOL, B.S. AND PH.D., IOWA STATE
Associate Professor of Chemistry (1954) — 33 Chipman Park

CHANDLER ARMSTRONG POTTER, A.B., AMHERST; M.F.A., YALE
Lecturer in Drama and Designer for the Theatre (1956) — 18 Springside Road

EVELYN ANN POTTINGER, A.B., WELLESLEY; PH.D., RADCLIFFE
Instructor in History (1962) — Apt. 3, 7 Weybridge Street

CAPTAIN RICHARD POWELL, A.B. MIDDLEBURY
Assistant Professor of Military Science R.O.T.C. Unit (1963)

HENRY BEALL PRICKITT, A.B., AMHERST; PH.D., HARVARD
Associate Professor of English (1948) — Blinn Lane

DAVID L. PROUTY, A.B., COLGATE; PH.D., TULANE
Assistant Professor of Psychology (1959) — Starr Hall

ROBERT F. REIFF, A.B., UNIV. OF ROCHESTER; PH.D., COLUMBIA
Associate Professor of Fine Arts (1958) — 105 South Main Street

ORLAND BRUCE REYNOLDS, B.S., COLLEGE OF IDAHO; PH.D., BOSTON UNIV.
Assistant Professor of Biology (1962) — Gorham Lane

THOMAS HEDLEY REYNOLDS, A.B., WILLIAMS; PH.D., COLUMBIA
Professor of History and Dean of Men (1949) — Blinn Lane

E. KIRK ROBERTS, A.B., EARLHAM; PH.D., HARVARD
Associate Professor of Chemistry (1952) — 46 High Street

JOHN S. ROBERTS, A.B., AND M.A., MIDDLEBURY
Lecturer in German (1962), *first semester, 1963–64* — Lincoln, Vt.

WILLIAM L. ROBINSON, B.S., MICHIGAN STATE; PH.D., UNIV. OF TORONTO
Visiting Assistant Professor of Biology (1963) — 81 Weybridge Street

BRUNO MORITZ SCHMIDT, A.B., WILLIAMS; M.A., YALE
Professor of Geology (1925) — 16 Daniel Chipman Park

NORMAN B. SCHWARTZ, B.A., C.C.N.Y.; M.A., UNIV. OF PENN.
Instructor in Anthropology (1962) — 43½ South Street

CHARLES POWELL SCOTT, A.B., OHIO STATE; B.D., PRINCETON THEOLOGICAL SEMINARY
Chaplain and Associate Professor of Religion (1951) — 6 Storrs Avenue

JOSETTE JEANNE SÉNATEUR, LICENCE-ÈS-LETTRES, C.A.P.E.S.
Instructor in French and Directress of Le Château (1963) — Le Château

ROBERT R. SHEEHAN, A.B., MIDDLEBURY
Assistant Professor of Physical Education for Men (1945) — R.F.D. 1, Middlebury

DAVID KINGSBURY SMITH, A.B., MIDDLEBURY; PH.D., HARVARD
Professor of Economics (1950) — Chipman Heights

PETER GATES SNYDER, A.B., YALE; M.A., WESLEYAN
Instructor in English (1963)

CAPTAIN CHARLES B. SPALDING, A.B., UNIV. OF VERMONT
Assistant Professor of Military Science, R.O.T.C. Unit (1963) — 41 Chipman Park

HOLLINS MCKIM STEELE, JR., B.A. PRINCETON UNIVERSITY; M.A. COLUMBIA UNIVERSITY
Instructor in Contemporary Civilization (1961) — 43 South Street

FREDERIC WASHBURN SWIFT, M.A., HARVARD; M.A., NEW YORK UNIV.
Lecturer in Psychology (1956) — 77 Main Street

LOUIS M. TAVELLI
Lecturer in Fine Arts, second semester (1964)

HARRIS E. THURBER, A.B., UNIV. OF VERMONT; PH.D., PRINCETON
Associate Professor of Political Science (1951) — 14 Elm Street

PARDON E. TILLINGHAST, A.B., BROWN; PH.D., HARVARD
Associate Professor of History (1947) *On leave, 1963–64* — 6 Adirondack View

JOAN LOUISE TOWNE, B.S., SKIDMORE; M.S., SMITH
Assistant Professor of Physical Education for Women (1960) — The Barn, Cornwall

JEAN ANTOINE VADON, LICENCE-ÈS-LETTRES, DIPLÔME D'ÉTUDES SUPÉRIEURES, C.A.P.E.S.
Instructor in French (1962) — 19 Chipman Park

MRS. JACQUELINE VADON, LICENCE-ÈS-LETTRES, DIPLÔME D'ÉTUDES SUPÉRIEURES, C.A.P.E.S.
Assistant in French (1962) — 19 Chipman Park

ERIE THEODORE VOLKERT, A.B., LAWRENCE; M.A., NORTHWESTERN
Professor of Drama and Director of the Theatre (1941) — 54 No. Pleasant Street

PETER WALTON, A.B., WILLIAMS
Lecturer in Fine Arts (1947)
On leave of absence, second semester, (1962–63) — Shoreham

CHARLES K. WARNER, A.B., HARVARD; PH.D., COLUMBIA
Associate Professor of History (1958) — R.F.D. 1, Middlebury

JAMES MAYER WATKINS, A.B., PENN. STATE; M.A., MIDDLEBURY
Assistant Professor of French and Director of the Language Laboratory (1958) — 81 Weybridge Street
Director of Studies, Graduate School in France, first semester; on leave, second semester, 1963–64

JOHN T. WENDERS, A.B., AMHERST; M.A., UNIV. OF HAWAII
Instructor in Economics (1963) 33 Chipman Park

BENJAMIN FRANKLIN WISSLER, B.S., MUHLENBERG; M.A., COLUMBIA; D.SC., MUHLENBERG
Professor of Physics (1930) 23 Weybridge Street

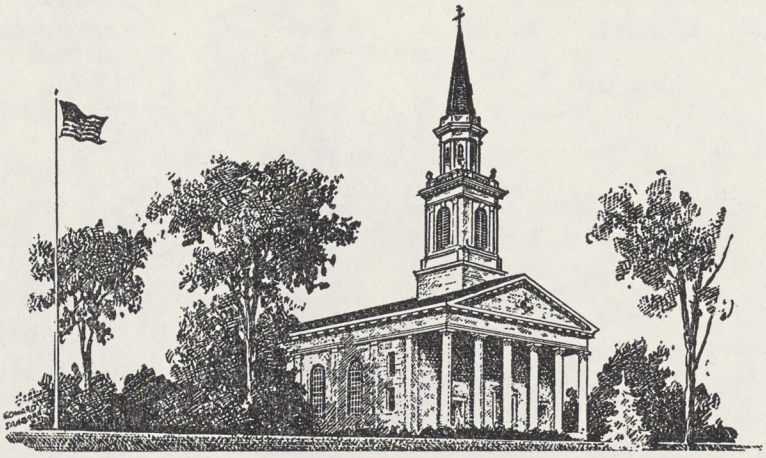
PAUL C. WERMUTH, A.B., M.A., BOSTON UNIV.; PH.D., PENN. STATE UNIV.
Visiting Associate Professor of American Literature (1963) 4 Hillcrest Avenue

KLAUS HEINRICH WOLFF, A.B., WABASH; PH.D., UNIV. OF CHICAGO
Assistant Professor of Economics (1956) Locust Lane

HOWARD EUGENE WOODIN, B.S., UNION; PH.D., PURDUE
Associate Professor of Botany (1953) R.D. 3, Middlebury

GLORIA M. YOUNG, B.S., UNIV. OF PENN.
Instructor in Physical Education for Women (1963)

CURRICULUM



MIDDLEBURY COLLEGE confers the one undergraduate degree, Bachelor of Arts. It also confers the graduate degrees, Master of Arts, Master of Science, and Doctor of Modern Languages.

UNDERGRADUATE WORK

The purpose of the liberal arts curriculum offered at Middlebury is to give every student a detailed knowledge of the work covered in at least one department, and to correlate with this knowledge a general understanding of many cultural subjects. Faculty advisers assist students in preparing a well-integrated program of courses.

To obtain the variety of interests and breadth of view which graduation from a college of liberal arts implies, undergraduates are urged to plan their college program and distribute their selection of courses wisely.

Previous to matriculation, all Freshmen are furnished with complete course descriptions and registration cards on which they designate their selection of courses for the first semester. During Freshman Week, each student is assigned a faculty counselor who gives further individual assistance in planning a course of study. Before the end of the student's second semester, his faculty counselor assists him in forming a tentative program for the remainder of his college course. A charge of $5 will be made for enrollment after the designated registration periods.

The normal program of study for each student is four or five courses. Freshmen will be required to elect five courses in addition to Physical Education and basic R.O.T.C. for men. No regular student will be allowed to elect fewer than thirteen credits per semester without permission of the Dean and the Chief Adviser. A student

may not carry more than sixteen credits unless he has an average of 80 or above during the previous semester, or is in his senior year, without permission of the Dean and the Chief Adviser. Independent study in the Major counts as three credits per semester in the senior year in determining minimum load and fees.

Registration for the Fall semester 1964–65 is to be scheduled following the Easter vacation: Juniors and Sophomores—April 27 to May 4, inc.; Freshmen—May 4 to May 8, inc.

Undergraduate work is reckoned in credits and courses. *A credit means one period of class work per week for one semester.* All courses, unless otherwise stated, are conducted three hours a week, so that the normal amount of work required is from thirteen to sixteen hours a week, or the equivalent, exclusive of preparation. Some courses require laboratory work in addition to class work, and *in general* credit is assigned to such courses on the basis of one credit for every three hours of laboratory work.

While the amount of time required for thorough preparation differs in different studies and for different students, every student should allow at least two hours for the preparation of each hour of recitation; the best results of collegiate training cannot be expected from less.

Freshman Requirements. In each of the first two semesters the election of English Literature (English 12) is prescribed by faculty regulation. The remaining four courses are free electives and may be chosen from any subjects open to Freshmen. At present these include introductory courses in Biology, Chemistry, Geology, Geography, History, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology, and any of the ancient or modern languages. Only those courses which are numbered from 10 through 19 are open to Freshmen, except that Freshmen enrolled in a course within a Department may be assigned to a more advanced course by that Department upon their demonstration of special proficiency. Those who have taken a modern language in high school and have acquired satisfactory preparation may continue the subject in intermediate courses. Entering Freshmen, qualified by reason of previous work and interest in a field, are permitted to elect courses above the Freshman level, on recommendation of the department concerned, the respective Dean and Director of Admissions, and with the approval of the Chief Adviser. It is advisable that students complete their science requirement during their first or second year.

Fields of Planned Study. Before the end of his second semester each student, in consultation with a faculty adviser, determines upon a Field of Planned Study to be pursued through the remainder of his course. A Field of Planned Study is a group of courses so planned as to form an integrated and coherent whole, attention being paid to the advantageous sequence of courses within a department and to the coordination of courses in different departments. As a rule each Field of Planned Study centers around some one department which sponsors the plan, the courses in the department being designated the major, those in other departments being called cognate courses.

When a field has been definitely chosen, a permanent adviser for the remainder of the college course is assigned to the student by and from the department sponsoring the plan chosen.

Degree Requirements. The following regulations are prescribed for the choice of studies, and each student before graduation shall meet these requirements as to a major and the distribution of work.

1. At the end of the student's second semester a major study shall be chosen, and the maximum and minimum requirements for work in that department shall be fulfilled before graduation. The minimum requirement for a major is 30 credits, including the six credits for passing the General Examination. The maximum permitted in any department is 48 credits out of the total of 120 credits.

2. A certain number of credits, not exceeding 30, may be required in such cognate courses in other departments as the major department may specify.

3. Each student before graduation is required to take, in addition to the Freshman requirements,

Group A. Two semester courses chosen from among the following literatures: English, American, Greek, Latin, French, German, Russian (in English), Spanish, Italian; certain courses in Philosophy; Religion; or any courses of a literary and cultural rather than a technical character in Drama, Fine Arts and Music. (Courses that satisfy this requirement are designated § under Courses of Instruction.)

Group B. Two semester courses from the following: Economics, World Regional Geography 10.1 and 2., History, Political Science, Psychology, Russian History (in English) or Sociology.

Group C. Two semester laboratory courses in one of the following departments: Biology, Chemistry, Geology, or Physics.

4. All students are required to demonstrate proficiency in an ancient or modern foreign language before graduation. Three years of effective language study in secondary school, or two years in college, will normally give the required proficiency. This requirement may be met in any one of the following ways:

(a) by a satisfactory score on the College Board Achievement Test, at the third-year secondary school level,

(b) by passing, preferably in the freshman year, a proficiency test prepared by the Middlebury College Language Division, and covering either a speaking or a reading knowledge, at the option of the student,

(c) by passing an intermediate, second-college-year course (designated by †) or a more advanced course, in a language previously studied,

(d) by passing a minimum of twelve semester hours in a language, the study of which is started at Middlebury.

5. The General Examination in the major department must be passed.

Freshmen may not elect more than one course in a subject in a semester, Sophomores not more than two, and Juniors and Seniors not more than three. The senior Independent Study Program counts as one course in the major. Not more than 48 credits in any subject, including the six credits for the General Examination, may be counted toward the degree.

Senior Requirement. The normal senior program consists of four scheduled courses plus Independent Study in the major field in preparation for the General Examinations during May. No academic credit is given for the Independent Study but six credit hours are awarded for the passing of the General Examination.

Other Regulations. A student who for any reason is not satisfied with his first choice of a major may before the end of his fourth semester change to another subject, but assurance should first be obtained from the department to which the change is proposed that the student will be able to meet its requirements in the remainder of

his course. After the close of the fourth term changes in a major subject will be allowed only for exceptional reasons and with the consent of the Chief Adviser.

No change in studies will be allowed during the first week of the classroom work except by the permission of the Adviser. During the second week of classroom work a change may be made only with the permission of the Adviser, Chief Adviser and the Instructor involved, and the payment of a fee of $5. The fee must be paid to the Cashier before the new admittance card is given to the instructor. After the second week of classroom work no change may be made except within a department and upon the initiative of the instructor.

No refund of fees for extra courses or for the use of laboratories will be allowed after the second full week of the term.

To be eligible for a degree, a student must complete 120 credits. Only 24 semester hours of D grade, including a D grade in the six credits for the General Examination, are allowed to count toward a degree.

All students are required to complete four semesters of Physical Education.

The last two semesters must be spent in residence at Middlebury, except as provided in the Technical, Medical, and Dental School Plans.

The Dean of Men, or the Dean of Women, with the Chief Adviser will consider any special curricular problems of veterans and grant waivers to the usual requirements when circumstances involve such factors as health, extended interruption of education, and family responsibilities.

"Successful completion of a year" for draft board certification is defined as "approved for continuance in college."

With the advance permission of the instructor and of the Dean, a student may attend a class regularly as an auditor, but he must take no part in the classroom exercises and make no demands upon the time of the instructor. A student auditing a course receives no college credit. Occasional visiting of a class is allowed with the permission of the instructor.

In order to transfer credit for work done at another recognized educational institution, a student must submit an official transcript. A grade of 70 or above, on a scale comparable to that in use at Middlebury, must have been attained in each course submitted for credit. Each case will be considered individually on its own merits, and must receive the approval of the chairman of the student's major department, the Chief Adviser, and the Dean. *Whenever possible, the student should secure advance permission to attempt such work at another institution.* Transfer of credit forms are available. All students transferring from other institutions are informed officially of their class standing and the amount of credit allotted not later than the end of their second month at Middlebury.

TECHNICAL, MEDICAL AND DENTAL SCHOOL PLANS

Students normally spend four years at Middlebury before going on to schools of engineering, architecture, medicine, and dentistry. However, a student preparing for one of these fields who wishes to limit his education at Middlebury to three years may transfer to an accredited school of engineering, architecture, medicine, or dentistry (requiring a minimum of two more years of study in the case of engineering, two or three in the case of architecture, and four in the case of medicine and dentistry) and become eligible for a Middlebury B.A. degree upon receipt of the professional degree. To qualify under this plan the student must complete at Middlebury the appropriate courses under (1) and fulfill the additional require-

ments under (2) below. In all cases the final approval for the granting of the Middlebury degree rests with the faculty.

Middlebury has formal agreements with Rensselaer Polytechnic Institute, the Columbia University School of Engineering, and the Duke University School of Engineering which ensure admission to these schools on a combined five-year course of study. Students wishing to take advantage of these agreements must fulfill the requirements stated above and in addition secure the recommendation of the Pre-Professional Committee.

1a. Pre-engineering and pre-architecture prescribed courses:

Freshman year: Chemistry 11.1 (and a second semester for engineers, but not required for architects), Mathematics 12.

Sophomore year: Economics 21, Mathematics 21, Physics 21.

Junior year: Mathematics 34.1, Physics 31.1, 32.2, Physics 47, Elective from Group A or B above the 11 level for engineers, from Fine Arts for architects.

b. Pre-medicine and pre-dentistry prescribed courses:

Freshman year: Biology 11, Chemistry 11.1, 19.1.

Sophomore year: Biology 21.1, 24.2; Chemistry 13.1, 23.2; Mathematics 12.

Junior year: Chemistry 15.1, 17.2, Physics 21, Elective in Economics, History, or Psychology.

2. Additional requirements: ninety credits must be completed at Middlebury, in at least seventy-two of which a grade of seventy must be earned; a combined average of seventy-five or better must be achieved in the specified courses (exclusive of the electives) in (1) above; the freshman, foreign language, and Group A, B, C requirements must be completed; and the student must rank in the upper half of his class during his fifth and sixth semesters.

A freshman who desires to participate in one of these plans should notify his adviser of his intention and arrange his program accordingly. At the end of the freshman year the student shall report to the chairman of the Pre-Professional Committee, Professor Benjamin F. Wissler, who will assign a faculty adviser for him as long as he continues in the program.

JUNIOR YEAR ABROAD

In these days of increasing inter-cultural contacts the College permits certain well-qualified students to spend their junior year studying abroad. Students applying for permission to study abroad will be judged on two principal bases: the extent to which they might profit from such study; and the effect they might have abroad as representatives of Middlebury College. Ordinarily such students will be expected to participate in one of the established foreign study programs. Students participating in these plans will receive credit from Middlebury after receipt of proper credentials from the sponsors of such plans. Students may also be allowed to make individual arrangements for study abroad, and be granted a year's leave of absence from the college. No guarantee of credit will be made in advance, and it will be the responsibility of the student to present evidence that the work done abroad has been similar in kind and quality to that expected of him at Middlebury.

Students interested in a Junior Year Abroad program should discuss the matter early with their faculty adviser and the Dean.

As part of their education in assuming personal responsibilities, students are held responsible by the College for keeping parents correctly and currently informed regarding their standing and progress in college. Final grades, mid-semester grades of freshmen, second course warnings, and notices of academic probation, of all students are sent to parents; other reports of class standing are sent to parents only by periodic request to the Dean.

The final evaluation of a freshman's work is normally postponed until the end of the college year; however, the academic standing of all freshmen is reviewed at the end of the first semester, and freshmen who have not demonstrated the ability and incentive to carry on college work may be asked to withdraw. Any freshman who receives three failing grades at the end of the first semester is dropped from college.

At the end of any semester (after the first semester of the freshman year) a student receiving failing grades in two courses will be dropped from college. At the end of any semester (after the first semester of the freshman year), a student receiving three grades below 70 is placed on academic probation for the following semester, at the end of which time all grades but one must be 70 or over and that one not below 60 if the student is to remain in college. No transfer of credits will affect a student's probationary status.

At any time when a student is failing a course, consistently receiving grades below 70, or in any way neglecting the obligations of a course, he is placed on warning for a minimum of four weeks and may take no more unexcused absences in the course for that period. The penalty for taking such an unexcused absence is loss of one-half credit. At the end of the four-week period he may be taken off warning by the Dean if the instructor certifies that his work has improved sufficiently to warrant this action.

A student who is on warning at the same time in two courses may no longer represent Middlebury in extracurricular activities away from the College for the duration of the period of warning and is required to curtail extracurricular activities which take time from academic work. Exception is made for participation in games played off campus when they occur during college holidays and involve no missing of classes. A student who is on warning at the same time in three courses is dropped from college, if it is the consensus of the instructors and the Dean that the failure is due to lack of application or to negligent attitude.

A student dropped for academic failure will not be readmitted except by special action of the Administration Committee. Readmission is a special privilege, not a right. The Committee will take favorable action only when it is satisfied that the factors which led to failure have been rectified, and that the student has both ample motivation and capacity to earn his degree. Application for readmission is made to the Administration Committee through the Dean. Any student readmitted shall be on probation for the first semester following his return and, if dropped a second time, shall not be readmitted. A student dropped at mid-years may not be considered for readmission until the following September; a student dropped in June may not be considered for readmission until one academic year has elapsed. Mere lapse of time is not sufficient basis for readmission. The burden of proof of motivation and capacity rests with the student. A student is encouraged to enroll at another accredited institution, and to submit a good record there. In some cases, military service or employment related to his interests may be considered as evidence.

Scholarship is graded on the scale of 100. Grades are interpreted as follows:

A	90 to 100	Excellent
B	80 to 89	Good
C	70 to 79	Fair
D	60 to 69	Passing
F	Below 60	Failure

A student who has completed 24 credits will be ranked as a Sophomore; 54 credits, a Junior; 84 credits, a Senior.

Reports of standing are made to the Registrar by the instructors at the end of each semester. Upperclassmen may obtain final grades directly from the Registrar's Office, Freshmen may obtain them from their advisers. The instructors are not permitted to give out final grades.

Students who attain an average of 85 in their courses at the end of a semester, and who have no grade below 80 are placed on the Dean's List. These students are granted the privilege of unlimited cuts for the entire following semester.

ATTENDANCE

The College considers it the responsibility of every student to attend all scheduled meetings of a class and to complete all assignments at the time specified by the instructor. Middlebury recognizes the value of extracurricular activities, and all students are encouraged to participate in social, athletic and cultural functions outside of scheduled class work, but participation in these events cannot be at the expense of curricular obligations.

Since the seriousness of absence varies among different types of courses, instructors announce to their classes their individual attendance requirements, and specify the conditions under which work may be made up after necessary absence.

Whenever, in the opinion of the instructor, a student's work in a course is being impaired by reason of non-attendance, the Dean is informed and the student required to consult the instructor and to comply with any demands made for completing the work missed. When an absence is not justified, the student may not make demands on an instructor's time out of class.

While on warning in a course, a student may take no unexcused absences in that course, under penalty of loss of one-half credit for each absence.

Before a necessary absence is taken in any course, all students are advised to prepare an "Explanation of Absence" form in the Dean's Office (in the Nurse's Office, if illness is the cause) and submit the form to the instructor. Absences are not *excused* by the Dean or Nurse prior to a student's being placed on warning, except for necessary absence from a pre-announced test or for absence due to an emergency or on the two days preceding or following a College recess. The explanations are for information only. The Dean's Office periodically submits to instructors names of students who are absent while participating in approved extracurricular activities.

On the last two days of classes preceding a College recess, or on the first two days of classes or exercises following a College recess, absences may be excused only for emergencies. Excuses are not granted for travel time, vacation employment, transportation arrangements and appointments away from College except in the case of scholarship holders and students on the Dean's list. One-half credit is deducted for each unexcused absence on these days.

When students are excused from attendance at classes during the two days prior to or after a vacation because of participation in a college sponsored activity, they must attend classes on the next two days prior to or after the excused absence.

At other times, reasons for absence which will usually be accepted as justifiable by the instructor and the Dean are necessary employment, illness (verified by the Nurse or Physician), participating in recognized extracurricular events, and emergencies.

Tardiness or unauthorized early departure from a class or exercise is recorded as an absence.

A student absent from a pre-announced test, without excuse, receives a failure for the test and is not granted the privilege of a make-up.

GENERAL EXAMINATION

In his senior year, each student before receiving the A.B. degree must pass the General Examination in his major department. One of the important objectives of Middlebury College is to provide for each of its students a well-integrated and unified body of intellectual experience. It wishes not only to give them factual and technical knowledge, but it wishes to assist them in developing that deep and broad understanding which comes from the assimilation of knowledge and from a comprehension of all parts of their major field and its relationship to other fields. With this objective in view, each Department defines and announces its objectives of over-all correlation and comprehension, in terms of its own subject matter, and informs its students regarding procedures to be followed. A student electing to complete a major in each of two departments must pass the General Examination in both departments.

Each senior will enroll in a course of Independent Study. Under the supervision of his major Department, he will prepare himself for the General Examination, endeavoring to achieve the correlation and comprehension of the subject matter, as defined by the Department. The Independent Study may also include individual reading and research in some area of special interest to the student. It will count as a course in the major, in determining load and fees, but it will carry no credits and no grades will be given. The General Examination, when passed, will carry six semester hours of credit.

HONORS

As a recognition of superior scholarship and ability the faculty has instituted a system of honors to be awarded at the completion of the college course. Honors are of two classes: commencement honors and departmental honors.

Commencement honors are awarded for high scholastic rank. The degree of A.B. is conferred *cum laude* upon those who have attained an average rank, for their entire work at Middlebury, of 85 to 88.99; *magna cum laude* if that rank is 89 to 90.99; *summa cum laude* if it is 91 or above.

Departmental honors are awarded as an incentive to special work and a recognition of superior ability in the student's major field of work. The student will undertake a special project for individual study and investigation, of sufficient importance to justify thorough study as the equivalent of one course in the Senior year.

The student will make application to his major department by March 1 of his Junior year. He must have been in the upper third of his class academically for two of the three previous semesters. If he receives the approval of the department and of

the Faculty Honors Committee, he will register at the April registration for a 70 course in his major department.

The department will assist the student in working out an appropriate program of preparatory reading and research to be completed during the summer. The work during the college year will be done individually by the student, but will be directed and supervised through frequent meetings with a faculty advisor. For the Class of 1964, seven hours credit, within the maximum of 48 in the major department, will be given for satisfactory completion of the project, whether Honors are actually granted or not.

The project will culminate in the presentation of a thesis and in an oral examination, this examination to be conducted by a Board consisting of members of the major department, and one member from outside the department. Three copies of the typed thesis will be submitted by April 20; and the original copy will be deposited in the Library. The oral examination will be held prior to the General Examination period in May.

If it is evident at any time prior to the beginning of the second semester that the student cannot complete the project satisfactorily, withdrawal from Honors with or without credit or penalty, on recommendation of the department, may occur. A grade of "in progress" will be turned in at mid-year, unless the project is to be dropped at that time; such grade will not be averaged with other grades at mid-year.

The oral examination Board will recommend that Honors or High Honors be granted, or that Honors be denied. Each department will decide the final grade on the project, according to the recommendation of the Orals Board.

To receive Honors, the candidate must stand in the upper third of his class in his whole college course; he must have an average of 80 or better in his major department and in the General Examination; and he must have a grade of 85 or better in the Honors project.

To receive High Honors, the candidate must stand in the top quarter of his class in his whole college course; he must have an average of 85 or better in his major department, and in the General Examination; and he must have a grade of 90 or better in the Honors project.

These honors will be printed on the Commencement program and in the next annual Catalogue, and will be certified to, when requested, by a written certificate from the Registrar and the chairman of the department, stating the nature and quality of the work done.

HONORARY APPOINTMENTS

The faculty, under the direction of the Corporation, gives honorary Commencement appointments; to the senior man and senior woman attaining highest rank, the appointment of Valedictorian, and to those second in rank, the appointment of Salutatorian.

Transfer students are not eligible for these appointments.

PHI BETA KAPPA

The Middlebury Chapter of the Phi Beta Kappa Society is the Beta of Vermont. Students are elected to Phi Beta Kappa by the faculty members of the chapter on the basis of outstanding academic achievement in all fields of their endeavor. Special consideration is given to the attainment of Honors or High Honors in the major de-

partment. Students are eligible for election at the beginning of their senior year on the basis of six terms work at Middlebury, or at the end of their senior year on the basis of eight terms work at Middlebury. Students graduating from Middlebury who have transferred from other colleges may be elected on the basis of at least four terms at Middlebury.

GRADUATE WORK

During the academic year, Middlebury College provides graduate courses in the Biology, Chemistry and French departments, for students desiring to work toward a Master's degree. Graduate students may be enrolled only if admitted by the Graduate Studies Board. Correspondence should be directed to the head of the department. The courses which are regularly offered for graduate credit are: Biology 34.2, 36.1, 37.1, 44.1, 44.2, 50.1 and 50.2; Chemistry 42.1, 42.2, 43.1, 44.1, 44.2, 45.1, 47.2, 49.1, 55.1, 55.2; French 32.1, 32.2, 41.1, 41.2, 43.1, 43.2, 44.1, 44.2, 45.1, 45.2, 46.1, 50.1, 50.2. Some courses in other departments may, under certain conditions, be raised to graduate level.

The degrees of Master of Arts and Master of Science may be earned by graduate work completed during the regular college year, or in the Summer Language Schools, in accordance with the following regulations:

1. The candidate must have a baccalaureate degree from this College, or from another institution whose course of study and requirements for graduation are approved by the Graduate Studies Board.
2. To obtain the degree of Master of Arts, or Master of Science, two full terms in residence and the completion of work equivalent to thirty credits will be necessary. This requirement of residence may also be met by attendance at the Summer Language Schools. Two-thirds of the required work must be completed at Middlebury College.
3. Candidates must satisfy the department chairman, and the Graduate Studies Board of their fitness to undertake the proposed program of graduate study.
4. Graduate work done in other institutions may be transferred toward the Middlebury degree, under certain specific limitations which may be learned from the Board.
5. Two-thirds of the required work must consist of graduate courses in the department of the major; the remaining one-third may consist of cognate courses of graduate grade prescribed by the department in which the major work is undertaken. A minimum grade of 80 shall be maintained in each course counting toward the degree.

Effective with students beginning graduate work in the summer of 1957, graduate credits earned at Middlebury College toward a Master's degree expire and may no longer be counted toward the Master's degree after ten years have elapsed since the study was done.

6. Tuition fees are the same as those charged for undergraduate work. An additional fee of $15 is required for the diploma.

GRADUATE SCHOOLS ABROAD

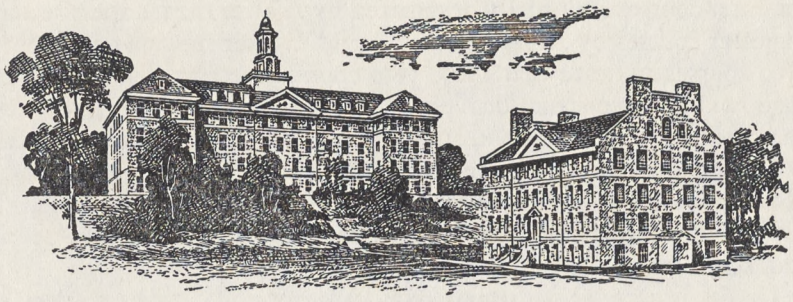
Middlebury College also conducts Graduate Schools of French in France, of German in Germany, of Italian in Italy, and of Spanish in Spain. Selected groups of graduate students are prepared by a required preliminary summer of study at Middlebury, and then are enrolled for the academic year in the University of Paris, the

University of Mainz, the University of Florence, or the Universities of Madrid or Salamanca. These students follow a coordinated program of advanced instruction in linguistics, phonetics, literature, institutions, and culture. They are enrolled in the various institutes or branches of the foreign university system, where the instruction is given by the regular faculty. The programs are under the supervision of resident representatives of Middlebury College, and the final examinations are administered under their direction. Successful candidates receive the Middlebury College Master of Arts degree. A special bulletin on the programs will be sent on request.

THE DEGREE OF DOCTOR OF MODERN LANGUAGES

In addition to the Master's degree, Middlebury College offers, through the Language Schools, the advanced degree of Doctor of Modern Languages (D.M.L.). A detailed statement of the requirements for this degree will be sent on request.

COURSES



THE DEPARTMENTS of instruction are organized in five Divisions: Humanities, Foreign Languages, Social Sciences, Natural Sciences, Military Science; and are described in this catalog in the following order:

Division of the Humanities

American Literature
English, Drama, and Speech
Fine Arts
Music
Philosophy
Religion

Division of the Foreign Languages

Classics
French
German
Russian
Spanish and Italian

Division of the Social Sciences

Economics
History
Political Science
Psychology
Sociology
Teacher Training

Division of the Natural Sciences

Biology
Chemistry
Geology and Geography
Mathematics
Physical Education
Physics

Division of Military Science

Explanation of Numbers and Symbols

All courses except Honors (70) courses are given as semester courses, with a final examination at the end of the semester. First-semester courses are usually designated by .1 after the number; second-semester courses by .2. The figures .1 and .2 after the same number for two courses indicate that those two courses are complementary, and together form an instructional program. The first course may or may not be prerequisite to the second and it may or may not be required to take both courses. Each semester course carries three credits or semester hours, unless specially indicated otherwise. Courses numbered 70 (Honors) are treated as a unit for the year, and give a tentative or "in-progress" grade at mid years.

Unless otherwise indicated, courses meet three times a week on alternate days. Courses numbered 10–19 are usually taken by freshmen; 20–29, by sophomores; 30–39, by juniors; 40–49, by seniors. Schedules are cleared on this basis, and conflicts will thus be most easily avoided.

At the head of each departmental section, the requirements for a major in that department are described, together with recommended courses.

Prerequisites to a course are shown in parentheses. Courses not being offered in 1963–64 are bracketed. Abbreviations include: Lab., laboratory period; Lect., lecture period; D., Drama. Courses marked § satisfy the Group A requirement. (Page 48). Courses marked † satisfy the foreign language requirement. (Page 48).

The college reserves the right, without further notice, to cancel any courses herein described, or to make any other changes in staff, fees, and courses which may be deemed necessary.

Division of the Humanities

Associate Professor Paul M. Cubeta, Chairman

AMERICAN LITERATURE
ENGLISH, DRAMA AND SPEECH
FINE ARTS
MUSIC
PHILOSOPHY
RELIGION

AMERICAN LITERATURE

Professor Cook
Professor Munford*
Associate Professor Beck
Visiting Associate Professor Wermuth

Required for a Major: Am. Lit. 21.1, 21.2, 31.1, 31.2, four other courses in the department, Independent Study, the General Examination; History 36.1, 36.2, and two of the following: English 22.1, 22.2, 31.2

21.1 American Literature Survey Fall Semester
The main currents of literary thought in America, with particular emphasis on selected works of major writers. (Eng. 12.1 and 12.2)
Mr. Cook, Mr. Beck, Mr. Wermuth

21.2 American Literature Spring Semester
Continuation of 21.1 (Am. Lit. 21.1) Mr. Cook, Mr. Beck, Mr. Wermuth

31.1 The American Novel Fall semester
The main tendencies in the development of the novel in America to the present day.
Mr. Cook

31.2 The American Novel Spring semester
Continuation of 31.1 (Am. Lit. 31.1) Mr. Cook

41.1 The American Short Story Fall semester
A study of short prose fiction in America. (Am. Lit. 21.1 and 21.2 and permission)
Mr. Beck

[41.2 Emerson, Melville and Whitman]

42.2 Contemporary America Poetry Spring semester
A study of the work of outstanding poets. (Am. Lit. 21.1 and 21.2 and permission.)

[44.1 American Biography]

45.1 Seminar Fall semester
A study of the age of Twain and James. (Am. Lit. 21.1 and 21.2 and permission).
Mr. Wermuth

46.2 Folk Ballads Spring semester
A study of the traditional ballad and related folksongs. (Am. Lit. 21.1 and 21.2 and permission) Mr. Beck

50.1 and 50.2 Special Research courses
Open to qualified students. (Permission) Staff

*On leave for the year, 1963–64.

ENGLISH, DRAMA AND SPEECH

Professor Volkert
Associate Professor Prickitt*
Associate Professor Merriman
Associate Professor Cubeta
Associate Professor Beck
Associate Professor Bowman
Associate Professor Clagett
Assistant Professor Littlefield
Assistant Professor Bahlke
Mr. Potter
Mr. Parker
Mr. Butler
Dr. Martin
Mr. Evans
Mr. Snyder

Required for a Major: English 12, two courses from the following: 22,31,32; one seminar course; two semester courses in English Literature; Independent Study; and the General Examination.

Recommended: Work in the following areas: American Literature, Drama, Fine Arts, History, Music, Philosophy, Foreign Literature.

12.1 Introduction to Literature Fall semester
Close critical reading of the lyric, romance, and drama, primarily in English, with extensive collateral work in related classics in translation. Frequent, short critical papers. Staff

12.2 Introduction to Literature Spring semester
(Continuation of English 12.1.) Critical study of the literary conventions, themes, and techniques of the epic, satire, and novel in English and classical literature. Staff

Literary History

20.1 Historical Study of English Literature§ Fall semester
Significant writers and literary types considered chronologically with reference to historical events and social backgrounds. (English 12) Mr. Merriman

20.2 Historical Study of English Literature§ Spring semester
Continuation of 20.1. (English 12) Mr. Merriman

22.1 Prose and Poetry of the Romantic Period§ Fall semester
The major representatives of the Romantic Movement, from Blake to Tennyson, including the forerunners of the movement and its philosophy. (Eng. 12) Limited to 50 students. Mr. Butler

*Chairman

22.2 Prose and Poetry of the Victorian Period§ Spring semester
Continuation of 22.1. The Victorian writers of poetry and prose. (Eng. 12)
Mr. Butler

31.1 Prose and Poetry of Tudor England§ Fall semester
A study of the major writers and concepts from 1500 to 1603, with an emphasis on the works of the Golden Age of Elizabeth. (English 12). Juniors and Seniors, Sophomores by permission. Mr. Parker

31.2 Prose and Poetry of the Earlier Seventeenth Century§ Spring semester
A study of the dominant literary trends and major writers from 1603 through Milton. (English 31.1 or permission.) Mr. Parker

32.1 Eighteenth Century Thought and Culture§ Fall semester
A study of the artistic, social and political ideals of the period 1660 to 1800, chiefly as reflected in the literature. The major figures read are Dryden, Pope and Swift. (Eng. 12) Mr. Prickitt

32.2 Eighteenth Century Thought and Culture§ Spring semester
Continuation of 32.1 The major figures are Goldsmith, Johnson, Boswell, Burke. (Eng. 32.1) Mr. Prickitt

41.1 Literature from the Anglo-Saxon Period to 1500 Fall semester
An intensive study through discussion, reports, short papers of representative works (epic, romance, allegory, drama, lyric). Modern English versions and translations will be used. (Juniors and Seniors, Permission) Mr. Martin

Courses in Writing

28.1 Expository Writing Fall semester
Practice in such factual types of writing as the article, research paper, report, exposition, essay, and argument. For students who wish to gain further effectiveness in composition or to remedy difficulties in writing at the college level. As far as possible, sections will be formed in accordance with the ability of the student and his choice of one of the above aims. (English 12) Mr. Clagett

28.2 Imaginative Writing Spring semester
Practice in descriptive and narrative writing, the informal essay, short story, and verse. An opportunity for the student to make an intensive attempt at creative writing. (Permission.) Mr. Clagett

38.1 Literary Composition
A seminar course in writing on an advanced level, limited to six or eight talented juniors and seniors. Each student will be allowed to complete a writing project for the semester with the advice and assistance of the instructor. (Permission.)
Mr. Clagett

38.2 Continuation of 38.1 Spring semester

Literary Types and Individual Writers

24.1 The English Novel§ Fall semester
A study of the English novel from Fielding to Hardy. Limited to 30 students. (English 12) Mr. Prickitt

24.2 Continuation of 24.1§ Spring semester
Discussion of selected 20th Century novels from Conrad to the present. Limited to 30 students. (English 12) Mr. Bahlke

[30.1A Shakespeare§]
The comedies, histories, and problem plays. (Juniors and Seniors)

30.2A Shakespeare§ Fall semester
An intensive study of the tragedies and late comedies. (Juniors and Seniors) Mr. Cubeta

33.1 Classics of Literature§ Fall semester
Selected great writings of the ancient world, Homer, the Greek dramatists, Plato, the Book of Job, Virgil, Ovid. (Eng. 12) Mr. Littlefield

33.2 Classics of Literature§ Spring semester
Selected great writings of the Christian era. The New Testament, Dante, Cervantes, Goethe, a Renaissance writer and a twentieth century writer. (Eng. 12) Mr. Littlefield

[34.1 Comparative Fiction§]

[34.2 Comparative Fiction§]

35.1 Elizabethan Drama§ Fall semester
The drama of the English Renaissance to the closing of the theaters in 1642. Emphasis on Marlowe and Ben Jonson. (Eng. 12 or permission.) Mr. Merriman

35.2 English Drama of the Restoration to the 20th Century§ Spring semester
Detailed study of Dramatic Literature from 1660 through Sheridan. (English 12 or permission) (Formerly 40.2) Mr. Merriman

[43.1 Literary Criticism§]

Seminar Courses

30.1B Shakespeare§ Fall semester
A seminar in the comedies, histories, and problem plays, intended primarily for literature majors. (Juniors and Seniors. Permission.) Mr. Cubeta

30.2B Shakespeare§ Spring semester
(Continuation of 30.1B.) A seminar in Shakespearean tragedy. (English 30.1B.) Mr. Cubeta

45.2 Contemporary English Poetry§ Spring semester

Reading and discussion of contemporary English poets. (English 12 and permission.)
Instructor

48.2 Chaucer§ Spring semester
Reading of all the important works with reports and discussion. Juniors and Seniors. (Permission.) Mr. Martin

49.1 A Detailed Consideration of One or Two Major English Writers.§
Fall semester
In 1963–64: Pope and the Roman Tradition; the major works of Pope considered in relation to the theory and practice of Roman poets of the Augustan Age. (Juniors, Seniors, Permission) Mr. Littlefield

[49.2 A Detailed Consideration of One or Two Major English Writers.§]
Spring semester

50.1 and 50.2 Research and Special Work§

DRAMA AND SPEECH

Professor Volkert
Associate Professor Bowman
Associate Professor Beck
Mr. Potter

Required for a Major in Drama: D27.2, D23, D25, D31.1, D35, D50.1 or D50.2, Independent Study, and the General Examination.
Recommended: D21.1, Eng. 20, Eng. 30, Amer. Lit. 21, F.A. 25, Music 13 or 46.

Drama

D23.1§ Theatre Literature and History to 1640 Fall semester
A study of the development of the theatre during the Classical, Medieval and Renaissance periods based on an examination of representative plays and workshop study of the theatres, productions, and actors in each period. Three hours of lecture and one workshop a week. Mr. Volkert, Mr. Potter

D23.2§ Theatre Literature and History to 1900 Spring semester
The same approach as D23.1 but covering the Neo-Classic, Baroque, Romantic, and Realistic periods. Mr. Volkert, Mr. Potter

D25.1 Production: Stage and Scenery; Basic Design Fall semester
Introduction to the environment of modern performance. Types of stages and equipment. Planning and organizing the production. Planning scenery, from preliminary sketches through scale drawings. Theories of construction, handling, and rigging. Application of design principles to the stage setting. Two hours of class and one workshop a week. Mr. Potter

D25.2 Production: Light and Costume Spring semester
Principles of light, sources and instruments, control, and layout. Light design for

proscenium and open stages. Elements of costume design and survey of principal periods. Two hours of class and one workshop a week. Mr. Potter

D31.1§ Modern Drama Fall semester
A study of representative plays of the 20th Century, Chekhov to Ionesco, including important contributors to the American theatre. Mr. Volkert

D32.1 Design: Advanced Problems Fall semester
Study of the visual elements of contemporary theatre through projects in scene and costume design for selected plays, and in light design, and theatre planning (architectural). Design and supervision of one-act productions. (D25.1; and D25.2 or permission.) Mr. Potter

D35.1 Directing Fall semester
Study and application of aesthetic principles involved in directing various types of plays for proscenium, arena and other styles of staging. Students also direct one-act plays or assist in the supervision of major productions. (D25.1 or permission.) Mr. Volkert

D35.2 Fundamentals of Stage Presentation Spring semester
A study of the theory and art of performance including experiments in the classroom and on stage in presenting scenes from representative plays. (Open to Sophomores.) Mr. Volkert

D42.1 Playwriting Fall semester
A study of playwriting and practice in developing dramatic situations and ideas in a manner suitable for stage presentation. (Permission.) Mr. Volkert

D50.1 and 50.2 Advanced Special Studies in Drama and Theatre Staff

Speech

D21.1 Fundamentals of Speech Fall semester
A study of the production and control of the mechanics of speech necessary for speaking before an audience. Exercises for flexibility, range, relief from tension, and articulation. Platform experience. Attention to individual problems. Equipment fee $3. Limited to 20 students per section. (Permission.) Mr. Bowman, Mr. Beck

D21.2 Public Speaking Spring semester
For those who wish to develop skill in public address. Designed to develop confidence, conversational spirit, freedom of bodily action. Emphasis on organization of material for various types of speeches. Opportunity for platform presentation in the classroom. Equipment fee, $3. Limited to 20 students per section. (Permission.) Mr. Bowman, Mr. Beck

D. 26.1 Debate and Discussion Fall semester
A practical course in the composition and delivery of convincing speeches based on

an analysis of current controversial topics. Emphasis is placed on the testing of evidence and cross-examination principles as used in a court of law. Platform experience. Valuable for students going into law or government work. Principles of group discussion are considered. (D21.1 and .2 or permission.) Mr. Bowman

D27.2 Oral Interpretation of Literature Spring semester
A course designed to aid the student in his appreciation of literature (prose, poetry, drama) by means of reading aloud. Consideration is given to dialects, choral, individual and group reading, and to the use of phonetics as a practical tool for oral study. Limited to 20 students. (D21.1 and D21.2 or permission.) Mr. Bowman

FINE ARTS

Professor Healy
Associate Professor Reiff
Mr. Walton
Mr. Tavelli

Required for a Major in Fine Arts: Fine Arts 25.1, 25.2, 21.1, 21.2, 24.1, 36.1, 39.1, 39.2, 40.2; Independent Study, and the General Examination.

Recommended: Fine Arts Practice Courses 26.1, 26.2, 27.2; also Music 13.1, 13.2, Drama 23.1; 23.2; Phil. 23.1, 23.2; Hist. 45.1, 45.2.

For those who plan to do graduate work in Art History, the taking of French, German, and Italian courses is recommended. For those interested in laying a foundation for graduate work in Architecture, the taking of Physics 11.1 and 11.2 is recommended.

For the admission of graduates of Art Schools, by transfer into advanced standing, see page 44 in the 1961–63 catalogue.

21.1 Introduction to Design§ Fall semester
Line, color, form, subject matter and composition are studied separately and together in projects related to picture making so as to increase the students' comprehension of the picture as an expressive, visual language. Fee $10.00. Limited to 30 students. Mr. Reiff

21.2 Introduction to Design§ Spring semester
Continuation of F.A. 21.1, with special emphasis on sculptural and architectural problems. (Fine Arts 21.1.) Fee $10.00. Limited to 30 students. F.A. 21.2 must be passed before credit for F.A. 21.1 will be given. Mr. Reiff

24.2 Far Eastern Art§ Spring semester
An historical survey of the development of the sculpture, painting, and architecture of India, China, and Japan. Also considered are aesthetic theories, iconography, philosophy, and religion as they relate to art. (May be open to qualified Freshmen. See p. 47) Mr. Reiff

25.1 History and Theory of Western Art§ Fall semester
History of the development of painting, sculpture and architecture, from prehistoric time to the Renaissance. A study of art history by means of reading, slides,

reproductions, travelling exhibits and lectures. (May be open to qualified Freshmen. See p. 47) Fee $5.00.

25.2 History and Theory of Western Art§ Spring semester
Continuation of F.A. 25.1. (May be open to qualified Freshmen. See p. 14) Fee $5.00 (F.A. 25.1, or permission.)

26.1 Practice in Drawing Fall semester
Study of the elements of drawing, including anatomy, linear perspective and drapery. Instruction and practice in drawing from models by means of lectures and individual criticism. Division of teaching time approximately one lecture hour to two in practice. Fee $5.00. (F.A. 21.1 and 21.2, or 25.1 and 25.2, or permission.)
Mr. Walton

26.2 Practice in Painting Spring semester
Continuation of 26.1. Study of color and the elements of oil painting. Instruction and practice in studio painting by means of lectures and individual criticism. Any technique may be exercised. Fee $5.00 (F.A. 21.1, 21.2, 25.1, 25.2, 26.1, or permission.)

27.2 Practice in Painting Spring semester
Painting in water color. Instruction and practice in water color painting, with emphasis upon design. Fee $5.00 (F.A. 21.1 and 21.2, 25.1 and 25.2, 26.1, or permission.) Limited to 20 students. Mr. Healy

35.1 Italian Renaissance Art Fall semester
A study of the history, successive stylistic developments, aesthetic theories, and iconography of the painting and sculpture from the period of the late Byzantine masters and Giotto to Tiepolo. Emphasis is given to the art of Masaccio, Piero della Francesca, Leonardo, and Michelangelo. (F.A. 25.1, 25.2, or permission). Offered in alternate years; not to be given in 1964–65. Mr. Reiff

36.1 Genesis and History of American Art§ Fall semester
History of the development of painting, sculpture and architecture from the Jacobean era in England to America today. A study of American art by means of reading, slides, study of reproductions, travelling exhibits and lectures. Fee $5.00. (F.A. 25.1, 25.2, or permission.) Mr. Healy

37.1 Art of the Middle Ages Fall semester
An exploratory examination of the architecture, sculpture, mosiacs and stained glass, together with pertinent manuscripts from the Early Christian Era to 1300. Open only to majors and selected students. Taught by individual conferences in guided study as well as by means of fortnightly seminars on general background. Suggested requirements History 12.1 and Religion. Mr. Healy

[38.1 Northern European Painting§]
This course is a survey of the art and civilization of Flanders, Germany, Northern France, and Holland for a period of 250 years beginning with 1400 and late Gothic manuscript painting. Special attention is given to the VanEycks, Hugo van der Goes, Dürer, Brueghel, Rubens, and Rembrandt. Offered in alternate years, to be given in 1964–65.

39.1 Modern Architecture§ Fall semester
A study of the most important phases of contemporary architecture in Europe and America, and a selective survey of developments in architecture since 1750, by means of lectures, slides, reading and exhibitions. (F.A. 25.1, 25.2, or permission).
Mr. Reiff

40.2 Modern Art§ Spring semester
Lectures on art of such painters as Watteau, David, Delacroix, Manet, the Impressionists, Van Gogh, Cezanne, Picasso, Matisse, the Surrealists, the Abstract-Expressionists, and others; and of such sculptors as Rodin, Arp, and Giacometti. (F.A. 25.1, 25.2, or permission.) Limited to 35 students. Mr. Reiff

MUSIC

Professor Carter
Mr. Chapman*
Mr. Browne

Required for major: 21, 31, 12 or 13, 50.2, plus two semesters from 37.1, 37.2, 38.1, 39.1, 39.2, 42.1, 42.2, 46.1, 46.2; Independent Study, and the General Examination. Candidates must demonstrate acceptable proficiency in some instrument or voice.

Recommended courses: Fine Arts 25, Drama D25.

For the admission of graduates of Music Schools, by transfer into advanced standing, see page 45.

12.1 History and Performance of Western Choral Literature§ Fall semester
A study of secular and sacred choral music of all historical periods. Basic theory, voice production, and sight-singing are included as a means of understanding through participation in performance of works drawn from the various periods studied. Two hours lecture, three hours lab. for three credits. Students who have taken the course may elect the lab. in later years for 1 pt. credit. There is no extra fee for the extra credit. Audition required. The course is required of students who wish to participate in the college choir. Fee $5 for the course. Mr. Browne

12.2 History and Performance of Western Choral Literature§ Spring semester
Continuation of 12.1 (Music 12.1) Fee $5. Mr. Browne

13.1 Music Survey§ Fall semester
A study of music history and literature from Gregorian Chant through Beethoven with emphasis on required listening of twenty representative works from J. S. Bach through Beethoven. Listeners equipment includes basic theory, and the understanding of the various forms of each period as applied to each work studied. Fee $7.
Mr. Carter

13.2 Music Survey§ Spring semester
A continuation of 13.1 covering materials and history from the Romantic period through the twentieth century. (Music 13.1) Fee $7. Juniors and Seniors by special permission. Mr. Carter

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*On leave of absence, 1963–64

[**21.1 Elementary Harmony**]
An introductory course in the elements of musical structure. Ear-training, four-part writing, and analysis of short works. (A piano techinque sufficient to play simple hymns required.)

[**21.2 Elementary Harmony**]
Continuation of 21.1 (Music 21.1)

31.1 Advanced Harmony Fall semester
Harmonic idiom of the Romantic, Post-Romantic, Impressionist periods. Analysis of chamber music and orchestral works, writing short compositions in strict and free style. Fee $5. Mr. Browne

31.2 Advanced Harmony Spring semester
Continuation of 31.1 (Music 31.1) Fee $5. Mr. Browne

37.1 Opera§ Fall semester
A history of the lyric theater and its literature presented through a study of recorded works and occasional trips to hear performances. (Music 13, or by permission Juniors and Seniors) Fee $7. Mr. Carter

37.2 Opera§ Spring semester
Continuation of 37.1 Covers works of Rossini, Bizet, Verdi, Moussorgsky, Puccini, Strauss, Berg, Blitzstein, Thomson. Fee $7. (Music 37.1 or by permission Juniors and Seniors) Mr. Carter

[**38.1 Johann Sebastian Bach§**]
A Study of the music of Baroque era with its culmination in Bach. (Music 13.) Fee $5.

[**38.2 Johann Sebastian Bach§**]
Continuation of 38.1. (Music 39.1) Fee $5.

[**42.1 Haydn§**]
Study of the music of the Classic era as exemplified by Haydn. (Music 13) Fee $5.

[**42.2 Mozart§**]
Study of the music of the Classic era as exemplified by Mozart. (Music 13) Fee $5.

46.1 Modern Period§ Fall semester
A survey of musical literature of the late 19th and 20th Centuries by the study of recorded works and occasional trips to hear performances. (Music 13) Juniors and Seniors by permission. Fee $7. Mr. Carter

46.2 Modern Period§ Spring semester
Continuation of 46.1 (Music 46.1). Fee $7. Mr. Carter

[**48.1 Music of the Middle Ages and the Renaissance§**]
A study of the music literature in Western civilization, from the beginning of the Christian era to the end of the 16th century. (Music 13) Fee $5.

[48.2 Music of the Middle Ages and the Renaissance§]
Continuation of 48.1 (Music 48.1) Fee $5.

50.2 Research and Special Work§ Fall semester

PRACTICAL MUSIC

The aim of this Department is to present music for its value as literature and as a record of one aspect of human achievement, not as professional training. We strongly encourage students to improve performing techniques as a necessary means of cultivating the art. However, no credit toward graduation is given for private study of practical music. The College will assist the student as far as possible in securing adequate instruction when not provided by the regular staff.

Students who wish private instruction in piano, voice, violin, viola, violoncello should enroll with the Chairman of the Department.

Fees are to be paid to the Treasurer's office at the beginning of each semester. No rebate is allowed for lessons missed except in the case of continued illness. Students may be accepted for less than a full semester, in which case fees will be prorated.

M-1 Private Instruction in the Study of the Pianoforte
1 lesson weekly, use of piano 1 hour daily. Fee $80.00 per semester.

M-2 Private Instruction in the Study of Voice
1 lesson weekly. Fee $66.50 per semester.

M-3 Private Instruction in Organ
1 lesson weekly; use of organ 1 hour daily. Fee $86 per semester.

M-4 Private Instruction in Violin and Viola
1 lesson weekly. Fee $66.50 per semester.

Music Library
The department equipment includes several thousand records, scores, and a cross reference file of the records. The collection kept in the Music Studio is available for both class work and student audition at hours set by the head of the department. Special listening equipment is available.

Music Organizations
The College Chamber Orchestra is open to all students who play an orchestral instrument and who qualify after auditions. The group holds weekly rehearsals and prepares concerts. Advanced instrumentalists who can qualify may have the opportunity of playing with the Vermont State Symphony Orchestra. Mr. CARTER

The College Choir sings in Sunday Vespers and special concerts on and off campus. Music 12 is required of all choir members. In conjunction with this course, a very active College Madrigal Group has been formed. In keeping with the educational intent of the choral program, repertoire for all performing groups is as historically inclusive and demanding as possible. Performance in languages other than English is stressed. Mr. BROWNE

Playing in small ensembles is encouraged. Those interested should see Mr. CARTER. The Choir and Orchestra work together on oratorios from time to time. Works given in recent years include: Mozart, Brahms, Faure Requiems, Handel Messiah, and Bach Mass in B minor, St. Matthew Passion and Magnificat, Berlioz L'Enfance du Christ, Haydn Masses, Heilig and Lord Nelson, Schubert G Major Mass.

PHILOSOPHY

Professor Andrews
Associate Professor Bigelow
Dr. Klive

Required for a Major: 22.1, 23.1, 23.2, 38.1 and .2; Independent Study and the General Examination.

11.1 Introduction to Philosophy§ Fall semester
A general introduction to the problems of philosophy, with particular emphasis on metaphysical problems. Mr. Andrews, Mr. Bigelow, Mr. Klive

11.2 Introduction to Philosophy§ Spring semester
Continuation of 11.1, with emphasis on ethical problems. (No prerequisite.)
Mr. Andrews, Mr. Bigelow, Mr. Klive

22.1 Logic Fall semester
The principles of inference, deductive and inductive, with concrete applications to various types of argument. Mr. Andrews

[**22.2 History of Science**]
The development of scientific thought and method from the Greeks to the eighteenth century.

23.1 History of Western Philosophy (Ancient) Fall semester
Main themes of philosophic thought from the beginning through the Hellenistic period. Principal authors read: Plato, Aristotle, Lucretius. The ideas involved will be discussed with an eye to their relevance to modern questions. (No prerequisite)
Mr. Bigelow, Mr. Klive

23.2 History of Western Philosophy (Medieval and Modern)
Spring semester
Continuation of Phil. 23.1 from the medieval period to the early 20th century. Among the authors read: Bacon, Descartes, Locke, Berkeley, Hume, Kant, James. (No prerequisite) Mr. Bigelow, Mr. Klive

27.1 Philosophy of Religion§ Fall semester
A study of the philosophical approach to religion. A critical analysis of the phenomena and criteria of religion, and the investigation of the possibilities of a World-view centering in the idea of God. Mr. Klive

32.1 Ethics Fall semester
A study of contemporary ethical theories and of one or two associated philosophical problems. (One semester of philosophy, or permission.) Mr. Bigelow

33.2 Esthetics§ Spring semester
An analytic study of the nature and functions of art: the creative process and the esthetic experience; the work of art and the esthetic value; the appreciation of art, empathy and the problem of criticism; the relation of art to society with particular emphases on the function of artistic myth and symbol in human relations. (Phil. 11.2, or 32.1, or permission) Mr. Klive

36.2 Philosophy of Science Spring semester
The nature of scientific thought and the principles which underlie the experimental method. (No prerequisite.) Mr. Andrews

37.1 Kant and the Nineteenth Century§ Fall semester
The philosophy of Kant, and subsequent developments in the nineteenth century. (Phil. 23.2 or permission.) Mr. Klive

38.1 Twentieth Century Philosophy Fall semester
A reading of systematic philosophers in the first quarter of the present century, such as James, Santayana, Russell, and Whitehead. (One year course in philosophy or permission.) Mr. Bigelow

38.2 Twentieth Century Philosophy Spring semester
Readings in more recent analytic philosophy, positivism, and existentialism. (Phil. 38.1 or permission.) Mr. Andrews

50.1 and 50.2 Fall and Spring semesters
Special seminar work for majors and advanced students.
Mr. Andrews, Mr. Bigelow Mr. Klive

RELIGION

Chaplain Scott
Mr. Nuovo

Mr. Youngquist

21.1 Introduction to the Bible§ Fall semester
Selected portions of the Old and New Testaments constitute the basic material of this course. An investigation of the methods of historico-literary criticism, the emergence of the Hebrew-Christian tradition, and the relevance of this tradition to the individual and society. Mr. Scott

21.2 Introduction to the Bible§ Spring semester
Continuation of 21.1 (21.1 or permission.) Mr. Scott

31.1 Principles of the Christian Faith§ Fall semester
A systematic introduction to the major elements of the Christian faith, including a discussion of such topics as: revelation and reason; the Hebrew-Christian concept of the existence and nature of God; the relation of God and the world; the nature, responsibility, and destiny of man; the person and work of Jesus Christ; the nature and function of the church. Mr. Nuovo

31.2 Christianity and Modern Society§ Spring semester
The application of Christian ethical principles to the tensions and problems of the present day in the following areas: sex and family life; the political order; the economic order; the challenge of Communism; race relations. Problems of both the individual and the community will be discussed. Mr. Nuovo

33.1 The Great Religions in the Modern World I§ Fall semester
An examination of the great living faiths of our time and their significance for an understanding of world culture. Judaism, Islam, and Christianity. Mr. Nuovo

33.2 The Great Religions in the Modern World II§
A continuation of Religion 33.1 Hinduism, Buddhism, Confucianism and Taoism.
Mr. Nuovo

35.2 Contemporary Religious Thought§ Spring semester
A course designed to acquaint the student with representative works by contemporary theologians such as Tillich, Buber, Niebuhr, Berdyaer, Barth, and others. (One semester of Religion or Philosophy.)

50.1 and 50.2 Fall and Spring semesters
Independent study for advanced students STAFF

(Note also: Philosophy 27.1, Philosophy of Religion.)

Division of Foreign Languages

Professor Werner Neuse, *Chairman*
Professor Samuel Guarnaccia, *Acting Chairman*
first semester, 1963–64.

CLASSICS
FRENCH
GERMAN
RUSSIAN
SPANISH AND ITALIAN

The Division Center in Hillcrest contains the offices of the several departments, the Language Aural-Oral Laboratory, classrooms, and twenty-seven listening rooms equipped with tape recorders and playbacks, and libraries of recordings for practice in hearing and speaking the foreign language. Students are urged, and in some courses required, to use these facilities to supplement their classwork.

Special Area Studies

A. French Language, Culture, and Area Studies
Administered by the French Department

Required for a Major: French 21, 31, 32, 44, 46.1, 50; Geog. 25, and 35.2, History 34; Pol. Sci. 20, and at least one of the following: Economics 21; Pol. Sci. 22; Sociology 23. Cognate courses in Geography, Political Science, History, and the humanities are recommended.

B. Spanish Language, Culture, and Area Studies
Administered by the Spanish Department

Required for a Major: Spanish 31, 40, 45, 43, 33 or 44, and 50; Geography 35.1, History 45. American Literature 21 or History 36, Economics 21; Political Science 20; Sociology 23. Cognate courses in Geography, Political Science, History, and the humanities are recommended.

CLASSICS

President Armstrong
Associate Professor Harris*
Dr. Heibges

Classics in Translation

[Classics 25.1 Satire and Comedy§]
Introduction to Satire and Old Comedy, through the New Comedy and Roman Comedy; the development of Satiric Drama.

Classics 25.2 Greek Tragedy§ Spring semester
Extensive outside reading, joined with intensive study of selected plays in multiple translation. Mr. Harris

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The principal aims of courses in the Classics are to enable the student to attain a rapid and accurate reading knowledge of Latin or Greek, and then to read broadly while he is developing his critical skill and sense of humanistic evaluation. Greek and Latin literature are understood to be a reflection of the spiritual and artistic concern which mark the literature of the West, and the major literary achievements are to be studied in this light.

*Chairman

Required for major: Latin 11, 21, 31, 41, or if the student enters with advanced standing (Cf. Latin 11 and 21 below) 21, 31, 41, and 50; Independent Study, and the General Examination. In addition, History 13 is required. Certain modifications of the program will be considered in the case of students who wish to do a double major or preferably a joint program in Classics and another language, Classics and English, Classics and Philosophy, etc.

Prospective majors are advised to begin Greek as early as possible, although this is not an absolute requirement for the Latin major program as such. Students who feel they may wish to proceed to graduate study of Classics or Comparative Literature should consult the department about French and German language requirements as soon as possible.

Latin

10.1 Introduction to Latin Fall semester

The student will be introduced to Latin by an inductive method, with use of tapes for intensive practice. This course is not open to those who have studied Latin according to conventional methods; they should enroll in Latin 10.2. The term's work will provide familiarity with all grammatical functions and a basic reading knowledge. Miss Heibges

10.2 Rapid reading of prose tests and introduction to verse Spring semester

For students with two or three years of high school Latin. Miss Heibges

21.1 Literature of the Republic§ Fall semester

Reading of representative pieces of Roman Comedy (Plautus and Terence); Roman Philosophy (Lucretius); Lyric Poetry (Catullus); Oratory and essays (Cicero). Greater emphasis will be placed upon acquiring a technique for rapid reading. Miss Heibges

21.2 Literature of the Republic§† Spring semester

Continuation of 21.1

31.1 Literature of the Augustan Period§ Fall semester

Introduction to the Augustan masters: Virgil, Horace, Propertius, Livy, Ovid. Choice of material will be arranged in accordance with the needs of individual students. Miss Heibges

31.2 Literature of the Augustan Period§ Spring Semester

Continuation of 31.1

41.1 Literature of the Empire§ Fall semester

The development of Roman Satire (Juvenal and Persius); the Historians (Suetonius and Tacitus); the Roman novel (Petronius and Apuleius); selected reading in technical and special-interest authors; Letters. The course will be largely in the framework of supervised reading, and the student will work intensively in some of the areas listed above rather than survey the period superficially. Mr. Harris

41.2 Literature of the Empire§ Spring semester

Continuation of 41.1

50.1 and 50.2 Advanced work for majors in the Department on special topics.

Greek

15.1 Introduction to Greek. Fall semester
No previous knowledge of the language is required. The first term will cover basic structure and vocabulary of Ancient Greek as a preparation for a reading knowledge of ancient Greek literature Miss Heibges

15.2 Rapid reading in easy original texts. Spring semester
Miss Heibges

24.1 Homer: The Iliad. Fall semester
Introduction to the style and language of the Epic and reading of several books of the Iliad. Mr. Harris

24.2 Homer: The Odyssey.† Spring semester
Mr. Harris

50.1 and 50.2 Independent work in Greek drama
Students will work largely on their own, and confer with the staff weekly about problems in language and interpretation of the tragedies being studied. About eight plays of Aeschylus, Sophocles, and Euripides will be covered in the year.

The student who completes 50.1 and 50.2 as outlined above in his Junior year can do another independent project in his Senior year: Plato and Aristotle in the first term, Thucydides and other historians in the second term.

FRENCH

Professor Bourcier
Assistant Professor Watkins **
M. Vadon
Mme Vadon
Mlle Sénateur
Mlle Mézennec

Required for a Major: 21, 31, 32, 44; or other equivalent; Independent Study and the General Examination. For women, at least one year of residence in Le Château.

Recommended: 41.2, 42; for prospective teachers, 41.1, 41.2.

Students intending to teach French should attend at least courses 31, 32, 41.1, 41.2.

See page 39 for the French Area Studies program. All courses in the French department are conducted in French at Le Château or in the Language Laboratory.

10.1 Beginners' French Fall semester
The oral inductive approach is used and the first objective is to master the patterns of simple spoken French. Reading, writing, and grammar are introduced afterward. Students are required to do a large part of their outside work in the Language Laboratory, in intensive individual exercises. Laboratory fee: $5.00. French 10.2 must be passed before credit for 10.1 is given. Mr. Vadon

**On leave, 1963–64

10.2 Beginners' French Spring semester
Continuation of 10.1 (French 10.1) Laboratory fee: $5.00. Mr. VADON

[11 Intermediate French]
NOTE: Special coaching sessions, without credit, will be aranged for students not enrolled in a French course, who wish to prepare for the Qualification Test to pass off the degree requirement.

12.1 Syntax, Reading, and Oral Practice Fall semester
The usual course for freshmen with two or three years of average preparation, or students who have completed 10.2. A systematic review of French syntax, and extensive reading of modern material. The course is conducted in French, and requires regular and intensive individual practice with tape recordings in the Laboratory to develop oral facility. Laboratory fee: $5.00. STAFF

12.2 Syntax, Reading, and Oral Practice† Spring semester
Continuation of 12.1. (French 12.1) Laboratory fee: $5.00. STAFF

21.1 Composition and Introduction to Modern Literature Fall semester
Composition based on French texts, and free composition, with constant reference to grammatical principles. Reading of modern and contemporary literature, with discussion in French of the ideas involved. Conducted entirely in French. (French 12.2. Freshmen with exceptional preparation may be admitted.) STAFF

21.2 Composition and Introduction to Modern Literature Spring semester
Continuation of 21.1. (French 21.1) STAFF

31.1 French Literature from the Middle Ages to 1750§ Fall semester
The origins of French literature, the Renaissance, the growth and decadence of French Classicism, the Age of Reason. Extensive readings; analysis of literary ideas; and discussion in French of the philosophical and human values of French literature. (French 21) Mr. VADON

31.2 French Literature from 1750 to the Present§ Spring semester
Rousseau and the development of French Romanticism; the major movements of the 19th century; and an introduction to contemporary literature. A continuation of French 31.1. (French 31.1) Mr. VADON

32.1 Advanced Grammar, Composition, and Stylistics Fall semester
A systematic and thorough review of French grammar with special stress upon the difficult points of syntax; vocabulary building; idioms. Composition based on idiomatic texts. The elements of style; translation into French of English stylists. Mr. VADON

32.2 Advanced Grammar, Composition, and Stylistics Spring semester
Continuation of French 32.1. (French 32.1) Mr. VADON

[41.1 Methods of Teaching Modern Languages]
Analysis of the methods of teaching modern foreign languages; recent developments in this field. The oral method. The selection of text-books; the construction of a syllabus; the use of realia. Demonstrations of classroom procedure and practice teaching. To be given in 1964–65.

[41.2 **Phonetics and Diction**]
A descriptive and historical study of the pronunciation of standard cultivated French. An analysis of the phonetic features of French that must be mastered by American students. Systematic exercises in pronunciation, intonation and reading of French prose and poetry. (Fee $6.00.) To be given in 1964–65.

[42.1 and 41.2 **Advanced Oral Practice**]
Designed to develop fluency in speaking French, and a command of idiomatic expression. Organized vocabulary development and oral composition on the basis of French life and customs.

43.1 French Literature of the Nineteenth Century § Fall semester
Romanticism, Realism, Naturalism and Symbolism; chief tendencies of contemporary literature. Careful analysis of texts and literary theories in class discussions; extensive outside reading of novels, plays, and poetry; written and oral reports. (French 31.) Offered in alternate years; not to be given in 1964–65.
Mr. Bourcier

43.2 French Literature of the Nineteenth Century § Spring semester
Continuation of French 43.1. (French 43.1) Mr. Bourcier

44.1 French Civilization § Fall semester
The geography of France; an outline of its political history, and an analysis of the development of the French nation; the civilization and culture of France, the growth of its arts, sciences, and institutions. (French 31) Mr. Bourcier

44.2 French Civilization § Spring semester
Continuation of French 44.1. (French 44.1) Mr. Bourcier

[45.1 **French Literature of the Seventeenth Century** §]
The origins and foundations of French Classicism; its philosophical and artistic implications; its main representatives: Descartes, Pascal, Corneille, Racine, Molière, La Fontaine; and the minor classicists. Analysis of texts and literary theories. (French 31.) Offered in alternate years; to be given in 1964–65.

[45.2 **French Literature of the Seventeenth Century** §]
Continuation of French 45.1. (French 45.1)

46.1 Contemporary France § Fall semester
An analysis of the present situation in France, in the light of recent history; her political, economic, social, religious and cultural life and the problems facing her. (Permission.) To be given in 1963–64. Mr. Bourcier

50.1 and 50.2 Advanced Studies in Language and Literature
Candidates for the Master's degree and Seniors, if properly qualified, may be permitted to undertake a special problem in reading and research under the direction of some member of the department. Staff

GERMAN

Professor Neuse*
Mr. Roberts**
Mr. Büttner
Mr. Berndt
Miss Klein

Required for a Major: 31.2, 32.1, 43.1, 44.1, 46.1, 47, Independent Study, and the General Examination

11.1 Beginners' German Fall semester
Elements of pronunciation, essentials of grammar. This course should be taken by those who have had no previous instruction in or contact with the language. German 11.2 must be passed before credit for 11.1 is given. Laboratory fee $3.
Mr. Roberts, Mr. Büttner, Miss Klein

11.2 Beginners' German Spring semester
Continuation of 11.1. Review of essentials of grammar, reading of simple prose and poems. (German 11.1.) Laboratory fee $3.
Mr. Roberts, Mr. Büttner, Miss Klein

21.1 Intermediate German Fall semester
Grammar review, reading, composition, conversation. This course is open to those who have had two years of high school German, or possibly less, are familiar with the basic elements of German grammar, and have some experience in hearing and speaking German. (German 11.2 or equivalent.) Laboratory fee $3.
Mr. Roberts, Mr. Büttner

21.2 Intermediate German† Spring semester

Continuation of 21.1. (German 21.1) Mr. Roberts, Mr. Büttner

22.1 Scientific German Fall semester
Grammar review, reading of more difficult Grman prose preparatory to the reading of original German texts in the scientific fields. Open to those who have had about two years of high school German, can read simple prose, and are familiar with the grammatical structure of the language. Not open to students who have taken 21.1 or 21.2 (German 11.2 or equivalent.) Mr. Roberts

22.2 Scientific German† Spring semester
Continuation of 22.1. In the second half of the semester, a limited number of students may select readings in their major field of study, e.g. Biology, Chemistry, etc. Group meetings, individual consultations. (German 22.1) Mr. Roberts

31.2 Modern German Literature§ Spring semester
General discussion of the major literary movements since the turn of the century; more detailed reading of selected pieces of prose, poetry, and drama. (German 21.2 or equivalent.) Mr. Neuse, Mr. Büttner

*On leave, first semester, 1963–64
**Acting chairman, first semester, 1963–64

32.1 Writing and Speaking German Fall semester
Practice in the oral elements of the language; written composition. (German 21 or equivalent.) Laboratory fee $3. Mr. Büttner

43.1 Survey of German Literature from Sachs to Lessing§ Fall semester
A brief survey from the end of the Middle Ages to the beginning of classical German literature. (German 31.1 or 32.1.) Offered in alternate not years; to be given in 1964–65. Mr. Büttner

[44.1 German Civilization§]
A study of the German people, its geographical, historical, economic, and political background; German art and folklore. (German 31.2 or 32.1.) Offered in alternate years; to be given in 1964–65.

[46.2 Literature of the 19th Century§]
A survey of the main currents of German literature during the nineteenth century starting with the Romantic Movement. (German 31.2 or 32.1.) Offered in alternate years; not to be given in 1964–65.

47.2 Goethe and Schiller§ Spring semester
The masterpieces of Goethe and Schiller, and the development of German literature in the great classic period. (German 21.) Offered in alternate years; not to be given in 1964–65. Mr. Neuse

50.1 and 50.2 Advanced Studies in Language and Literature
Fall and Spring semesters

Students who have the proper qualifications may enroll in this seminar course for special work in literary or linguistic investigation. (Permission.) Mr. Neuse

RUSSIAN

Professor Fayer
Mrs. Normano
Mr. Gonczarow

Required for a Major: 21, 31, 25.1, 25.2, 35.1, 35.2, 50.1, 50.2; Independent Study, and the General Examination.

11.1 Beginners' Russian
Elements of grammar, oral and written drills, with particular emphasis on the spoken language of everyday use. Reading of easy Russian texts, singing and dramatization with a view to vocabulary and pronunciation. Two laboratory hours of work with records and tape recordings weekly, replacing a part of the usual home study. Russian 11.2 must be passed before credit for 11.1 is given. Laboratory fee $2.00. Staff

11.2 Beginners' Russian Spring semester
Continuation of 11.1. (Russian 11.1.) Laboratory fee $2.00. Staff

21.1 Intermediate Russian Fall semester
Systematic review of the essentials of grammar; dictation, composition, conversa-

tion, and reading selections from standard Russian authors. Extensive work with tape recordings. (Russian 11.2 or equivalent.) Lab. fee $2.00. STAFF

21.2 Intermediate Russian† Spring semester
Continuation of 21.1. (Russian 21.1 or equivalent.) Lab. fee $2.00. STAFF

25.1 Russian Literature and Culture (in English)§ Fall semester
Russia before the Revolution; a survey of Russian institutions and ideas up to the Bolshevik Revolution, with special emphasis on the culture of the 19th century. The major part of the course will deal with the great literary figures: Pushkin, Gogol, Goncharov, Turgenev, Tolstoy, Dostoevsky, and Chekhov. No knowledge of Russian is required. Offered in alternate years; not to be given in 1964–65. No prerequisite. Mr. FAYER

25.2 Political and Social History of the U.S.S.R. (in English) Spring semester
The Russian Revolution and its historical background. The political, social and cultural evolution of Soviet Russia from 1917 to the present time. Special emphasis is placed on the theory, practice, and implications of Russian Communism for the rest of the world. No knowledge of Russian is required. Offered in alternate years; not to be given in 1964–65. (Counts as a Group B course.) No prerequisite.
Mr. FAYER

31.1 Conversation and Composition Fall semester
Reading of periodical literature, area studies, oral and written reports on assigned topics, and class discussions of Russian life and customs. Designed to develop fluency in the use of Russian. (Russian 21.2 or equivalent.) STAFF

31.2 Conversation and Composition Spring semester
Continuation of 31.1. (Russian 31.1 or equivalent.) STAFF

[**35.1 Tolstoy and Dostoevsky: Their Works and Influence (in English)§**]
A study of the period, significant works, influence at home and abroad. Offered in alternate years; to be given in 1964–65.

[**35.2 Contemporary Russian Literature (in Russian)§**]
Major literary trends since 1880 in Russian drama and fiction. Offered in alternate years; to be given in 1964–65.

41.1 Advanced Language Study through Literature Fall semester
Based on the reading of 19th and 20th century short stories by Russian literary masters. Intended for students desiring to combine extensive reading with oral and written expression. Particular emphasis will be placed on advanced grammar and syntax. (Russian 31.2 or permission.) Mr. FAYER

41.2 Advanced Language Study through Literature Spring semester
Continuation of Russian 41.1. (Russian 41.1) Mr. FAYER

50.1 and 50.2 Advanced Studies in Language and Literature
Fall and Spring semesters
Students who have the proper qualifications may undertake a special problem in reading and research. Mr. FAYER

SPANISH AND ITALIAN

Professor Guarnaccia
Mr. Gil Novales
Mrs. Centeno
Miss Martínez

Required for a Major: 31, 40, 43.1, 43.2, 44, 45, Independent Study, and the General Examination. Women majoring in the Spanish Dept. will be required to live in the Casa Espãnola one year, preferably the Junior year.

Spanish

11.1 Beginners' Spanish Fall semester
Elements of pronunciation; fundamentals of grammar; reading of simple texts; careful vocabulary building. Two hours of work in the laboratory each week, with tape recordings, replacing a part of the usual home study. Spanish 11.2 must be passed before credit for 11.1 is given. Laboratory fee $2.00. Staff

11.2 Beginners' Spanish Spring semester
(Continuation of 11.1) Laboratory fee $2.00. Staff

12.1 Intermediate Spanish Fall semester
This course is offered for students who have had previous work in Spanish but whose preparation would not be sufficient to admit them to the review class. Laboratory fee $2.00. Mrs. Centeno, Miss Martínez

12.2 Intermediate Spanish† Spring semester
(Continuation of 12.1) Laboratory Fee $2.00. Mrs. Centeno, Miss Martínez

21.1 Review Grammar and Reading Fall semester
Thorough review of grammar principles; reading of several texts; discussion and written reports; oral reports on outside reading. Designed for students with two or three years of high school Spanish and some training in understanding and speaking the language. Mr. Guarnaccia, Mrs. Centeno, Miss Martínez

21.2 Review Grammar and Reading† Spring semester
(Continuation of 21.1) Mr. Guarnaccia, Mrs. Centeno, Miss Martínez

31.1 Vocabulary and Conversation Fall semester
Intensive aural and oral training will be combined with extensive reading. Planned to develop a basic active vocabulary and facility in understanding written and spoken Spanish. (Spanish 21 or permission.) Laboratory fee $4.00.
Mr. Gil Novales, Miss Martínez

31.2 Introduction to Literature Spring semester
Introduction to Spanish Literature: A brief survey of Spanish Literature as a preparation for further and more advanced study; lectures, reading of characteristic works, oral and written reports. (Span. 31.1) Mr. Gil Novales, Miss Martínez

[40. Survey of Spanish Literature§]
Offered in alternate years; to be given in 1964–65.

43.1 Spanish Civilization§ Fall semester
Study of the Spanish character and of Spain's contribution to world civilization;

the geographical, ethnical, historical, political, literary, and artistic evolution of Spain, together with a study of its most important traditions and customs. Offered in alternate years; not to be given in 1964–65. Mr. Gil Novales

43.2 Spanish American Civilization§ Spring semester
With a similar method and parallel subject matter to Spanish 43.1, this course will study Spanish America, and its contribution to America's culture. Offered in alternate years; not to be given in 1964–65. Mr. Gil Novales

44.1 Advanced Language Study Fall semester
A systematic and thorough review of Spanish grammar with particular emphasis on the most difficult points of syntax; composition, translation. Designed to give a good preparation in written Spanish to students planning to teach. (Spanish 21.2 or permission.) Mrs. Centeno

44.2 Advanced Language Study Spring semester
Continuation of Spanish 44.1. (Span. 44.1) Mrs. Centeno

45.1 Survey of Spanish American Literature§ Fall semester
A general course presenting the main trends of Spanish American Literature; lectures, commentaries, class discussions, oral and written reports. Offered in alternate years; not to be given in 1964–65. Mr. Gil Novales

45.2 Survey of Spanish American Literature§ Spring semester
Continuation of Spanish 45.1. (Span. 45.1) Mr. Gil Novales

[46. Readings in Contemporary Literature§]
Offered in alternate years; to be given in 1964–65.

50.1 and .2 Advanced Studies in Language and Literature
Fall and Spring semesters
Staff

Italian

Professor Guarnaccia

15.1 First year Italian Fall semester
Grammar, pronunciation, dictation, conversation. Varied readings from representative authors. Italian 15.2 must be passed before credit for 15.1 will be given.
Mr. Guarnaccia

15.2 First year Italian Spring semester
Continuation of 15.1 and must be taken with it. Mr. Guarnaccia

25.1 Second year Italian Fall semester
Grammar review; intensive and extensive reading; vocabulary and oral practice. Designed to prepare the student for more advanced study of spoken and literary Italian. Mr. Guarnaccia

25.2 Second year Italian† Spring semester
Continuation of 25.1 (Ital. 25.1) Mr. Guarnaccia

[35. Survey of Italian Literature§]

Division of the Social Sciences

Professor Karl L. Anderson, *Chairman*

ECONOMICS
HISTORY
POLITICAL SCIENCE
PSYCHOLOGY
SOCIOLOGY—ANTHROPOLOGY
TEACHER TRAINING

ECONOMICS

Professor Anderson
Professor Smith†
Associate Professor Craven
Assistant Professor Wolff
Mr. Wenders

Required for a Major in Economics 21.1 and .2, 26.1, 27.1, 33.1, 38.1 and .2, one other semester course in Economics; Independent Study and the General Examination.

Cognate Courses Strongly Recommended; History and Mathematics. Cognate Courses Recommended: Political Science and Geography.

21.1 Principles of Economics Fall semester
A study of economic institutions; value theory; theory of income and employment; money and banking; foreign trade; income distribution; economic systems. Topics not covered in 21.1 will be studied in 21.2. Staff

21.2 Principles of Economics Spring semester
Continuation of 21.1. Credit for 21.1 is withheld until successful completion of 21.2. (21.1 or permission.) Staff

26.1 Economics Statistics Fall and Spring semesters
A study of statistical concepts and their applications to Economics. The course emphasizes training in the analytical and interpretative aspects of the statistics used in Economics (No student who takes Econ. 26.1 may also take Math. 35.1 for credit.) Calculating machine, fee $6.00. (Permission of Instructor.) Mr. Wenders

27.1 Principles of Accounting Fall and Spring semesters
The basis for accounting; accounting procedures with as much emphasis as possible on the theoretical considerations involved; proprietorship accounting. Mr. Smith

27.2 Principles of Accounting Spring semester
Partnership and corporate accounting; cost accounting; theory of accounting. (Economics 27.1) Mr. Smith

32.2 International Trade Spring semester
A study of international economic relationships in theory and practice. (Economics 21.1 and .2.) Mr. Anderson

33.1 The Theory of the Firm and the Consumer. Fall and Spring semesters
A detailed analysis of demand and production theory; price and output equilibrium

†Chairman

under varying market structures; the functional distribution of income. (Economics 21.1 and 21.2) Mr. WENDERS

34.2 The Corporation and the Economy Spring semester
A study of the financing of corporate activity; of the corporation as "entrepreneur"; of the corporation as an object of governmental regulation; of the coporation viewed as a major institution in the society. (Econ. 21.1 and .2) Mr. CRAVEN

38.1 The National Economy Fall semester
A study of the determinants of the total output of the economy, of fluctuations and growth; examination of the relevant questions of public policy. (Econ. 21.1 and .2) Mr. ANDERSON

38.2 The National Economy Spring semester
Continuation of 38.1. (38.1 must be taken prior to 38.2) Mr. ANDERSON

40.1 Economic Development Fall semester
A study of competing policies and important theories related to current problems and past experiences in the economic development of certain countries and regions. Specific comparison of "Communist" planning with the development of "Capitalist" economies. (Economics 21.1 and .2 and Permission. Limited to 20 students.) Mr. WOLFF

40.2 Economic Development Spring Semester
A continuation of 40.1 with prerequisite of 40.1 (Economics 40.2 must be passed before credit is given for 40.1) Mr. WOLFF

41.1 Labor Problems and Public Policy Fall semester
The economics of labor; the labor movement and its history; labor law and legislation. (Econ. 21.1 and .2) Mr. CRAVEN

[**42.2 Public Policy toward Business**]
A study of the major areas of public policy toward business emphasizing the problem of maintaining competition. (Econ. 21.1 and .2)

[**44.2 Government Finance**]
Principles and practices relating to government revenues, budgeting and expenditures, incidence and effects of taxation; fiscal policy; the use of public credit. (Econ. 21.1 and .2)

[**45.2 Comparative Economic Systems**]
An analysis of the alternative methods proposed and used for solving the universal economic problems under different social and political philosophies and forms of government. (Econ. 21.1 and .2)

[**46.1 and .2 Economics of Business Management**]
A study of the application of the principles of Economics to the decisions of management.

[48.1 and .2 **Economic Thought and Modern Economic Tendencies**]
A study of the great thinkers in Economics against the background of their times.

50.1 and 50.2 Fall and Spring semesters
To be arranged for qualified students as need arises. STAFF

HISTORY

Associate Professor REYNOLDS
Associate Professor TILLINGHAST*
Associate Professor WARNER
Assistant Professor CAMPBELL
Mr. STEELE
Miss POTTINGER
Mr. MARTIN

Assistant Professor HARRIS

Required for all History majors: History 12, History 40, two one-semester pro-seminars in the junior year (History 30 or 31); Independent Study in the senior year and two one-year courses or their equivalent in the department, one of which must be in the field of American History. At the end of their junior year all History majors will take a qualifying exam. Those qualifying will be permitted to substitute a senior thesis for the Independent Study Program. Students seeking honors in History must qualify for and complete their major with a senior thesis.

12.1 History of Western Europe Fall Semester
Stresses the current of ideas, which is considered basic. Political, administrative and economic history are treated as contributing to the change of ideas in developing Western European society. Readings from original (paperback) sources will be emphasized. From the fall of Rome to 1600 A.D. Freshmen and sophomores. Juniors and Seniors by permission only. Mr. STEELE AND STAFF

12.2 History of Western Europe Spring semester
Continuation of 12.1. The period from 1600 to 1950. History 12.1 or permission.)
Mr. STEELE AND STAFF

13.1 Ancient History Fall semester
The Near East and Greece to the rise of Macedonia. Mr. HARRIS

13.2 Ancient History Spring semester
Continuation of 13.1. The Hellenistic Near East and Rome. Miss HEIBGES

22.1 American History 1783-1860 Fall semester
A broad survey of American social and political history. The course provides an introduction for those who plan to do further work in American History and a sufficiently comprehensive coverage for those desiring a single year in the field (Not open to freshmen.) Mr. REYNOLDS, Mr. MARTIN

22.2 American History, 1860-1940 Spring semester
Continuation of 22.1. (Hist. 22.1.) Mr. REYNOLDS, Mr. MARTIN

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*On leave, 1963–64

[23.1 **Modern English History**]

30 a.1 Pro Seminar: Colonial History Fall Semester
(History majors or permission) Mr. MARTIN

30 b.2 Pro Seminar: The American National Period Fall semester
(History majors or permission) Mr. MARTIN

30 c. 1 Pro Seminar: The Age of Reform 1885-1914 Spring semester
(History majors or permission) Mr. MARTIN

30 d. 2 Pro Seminar: The New Deal and World War II Spring Semester
(History majors or permission) Mr. MARTIN

[31 a. 1 **Pro Seminar: The Middle Ages**]

[31 b. 2 **Pro Seminar: The Rennaissance and Reformation**]

31 c. 1 Pro Seminar: The French Revolution Fall Semester
(History majors or permission) Miss POTTINGER

31 d. 2 Pro Seminar: Imperialism Spring Semester
(History majors or permission) Mr. WARNER

31 e. 2 Pro Seminar: Diplomacy of the Second Empire Spring semester
Miss POTTINGER

31 f. 1 Pro Seminar: The Old Colonial System Fall semester
Mr. WARNER

[32.1 **Economic History of the United States**]

[32.2 **Economic History of the United States**]

33.1 The Middle East and Africa, an Historical Study Fall semester
The history of the Middle East and Africa prior to the era of European domination.
Mr. STEELE

33.2 The Middle East and Africa, an Historical Study Spring semester
The spread of European influence and the response of the Middle East and Africa to the import of modern European civilization. Mr. STEELE

34.1 History of Modern Europe (1870-1914) Fall semester
An analysis of the social, economic and political growth of Europe from the Franco-Prussian War to World War I. Concentration by the student in a special area or country is encouraged. (History 12 or permission.) Mr. STEELE

34.2 History of Modern Europe (1914-1950) Spring semester
A continuation of History 34.1 into the modern period, with special attention given to the rise of modern totalitarianism. Concentration by the student in a special area or country is encouraged. (History 34.1 or permission.) Mr. STEELE

36.1 American Thought and Culture Fall semester
The colonial and early national period. (Hist. 22.1 or 32.1 or Am. Lit. 21.1 or permission.) Mr. REYNOLDS

36.2 American Thought and Culture Spring semester
Continuation of 36.1. From the Civil War to the present. (Hist. 36.1 or permission.) Mr. Reynolds

40.1 Philosophy of History Fall semester
A broader survey of history in general than can be attempted in any more specialized course. Its purpose is to sum up the student's historical knowledge, and to apply it to key historical situations from the beginnings of civilization down to our own time. Required of Seniors majoring in History; open to other seniors by permission.
Mr. Reynolds, Miss Pottinger

40.2 Philosophy of History Spring semester
Continuation of 40.1 Mr. Reynolds, Miss Pottinger

45.1 Intellectual History of Modern Europe Fall semester
This course traces the history of ideas and their impact on society beginning with the Scientific Revolution of the sixteenth and seventeenth centuries and continuing to the present. Among topics treated are the Enlightenment, Romanticism, Social Darwinism, Socialism, the New Physics and contemporary intellectual developments.
Mr. Warner

45.2 Intellectual History of Modern Europe Fall semester
Continuation of 45.1. (Hist. 45.1 or permission.) Mr. Warner

48.1 History of East Asia Fall semester
A study of the civilizations of China, Japan and Korea from their beginnings to about 1800. Material covering the development of Philosphy, Art and Literature in these countries, as well as the growth of political, economic and social institutions is included. Mr. Campbell

48.2 History of East Asia Spring semester
A study of the impact of European and American ideas and institutions on the civilizations of East Asia during the period from 1800 to the present. The historical background of contemporary problems is included. Mr. Campbell

50.1 and .2 Fall and Spring semesters
Independent study for majors in the department. Staff

POLITICAL SCIENCE

Professor Hoag
Associate Professor Thurber*
Mr. Lendt
Mr. Nelson

Required for a Major: 11.1, 11.2, Independent Study and the General Examination; Economics 21.1, 21.2. A total of 30 semester hours in political science must be completed in order to satisfy major requirements.

Recommended: American Literature 21.1, 21.2; Economics 38.1, 38.2, 41.1, 42.2, 44.2, Geography 25.1, 25.2; History 12.1, 12.2, 22.1, 22.2, Psychology 11.1, 11.2; and Sociology 12.1, 12.2. Other courses may be recommended to fit the purposes of individual students.

*Chairman

Cognate programs for the major in Political Science may range over a broad field and may be planned variously to meet differing purposes of students. The required Economics course should be taken in the sophomore year. It is desired that at least one course in Political Science be elected each year.

11.1 Government of the United States Fall semester
General introductory course, based on a study of the national government and the state and local governments, their basic theories, formation, structure, powers and operation, and their relations with each other; references to political principles and other systems of government. STAFF

11.2 Government of the United States Spring semester
Continuation of 11.1. (Pol. Sci. 11.1 or permission.) STAFF

20.1 International Politics Fall semester
A study of the relations among states, to include both "major" and "lesser" powers; the process by which policy is made; the factors that tend to shape policy. The international political process; interaction among states; basic factors in world politics; regional and international political and functional organization. (Pol. Sci. 11.1, 11.2) Mr. LENDT

20.2 International Politics Spring Semester
Continuation of 20.1. (Poli. Sci. 20.1) Mr. LENDT

21.1 Local Government Spring semester
Rural and urban units of local jurisdiction, including townships, counties, special purpose districts, regional districts, villages, cities and city-county organization. Powers and limitations, and the significance of their place in American affairs. Relevant comparisons with local government in other countries. (Pol, Sci. 11.1, 11.2.) Mr. NELSON

22.1 Comparative Government Fall semester
Comparative analysis of selected foreign governments, with emphasis on constitutional theory and practice and underlying social and political ideas. Great Britain and the Soviet Union. (Pol. Sci. 11.1, 11.2.) Mr. THURBER

22.2 Comparative Government Spring semester
Continuation of 22.1. France, Germany and Canada. (Political Science 22.1) Mr. THURBER

33.2 Administration Fall Semester
Principles involved, followed by an analysis of various problems encountered by administrators. Comparisons of administration and administrative problems in public jurisdictions and private institutions. (Political Science 11.1, 11.2.)

35.1 Governments and Politics of the Far East. Fall semester
A study of the governmental systems of the major governments of the Far East, with emphasis on China, Japan and Korea. Attention will be paid to the rise of Nationalism and Communism in Asia as well as the relations of these countries with the West. (Pol. Sci. 11.1 and 11.2). Mr. HOAG

35.2. Continuation of 35.2. Spring semester
(Pol. Sci. 35.1) Mr. Hoag

36.1 Foreign Policy of the United States Fall semester
Organization of our government for the conduct of foreign affairs, with a critical evaluation of each of our general and regional policies. Special emphasis will be placed upon current problems. (Pol. Sci. 11.1, 11.2) Mr. Hoag

36.2 Foreign Policy of the United States Spring semester
Continuation of 36.1. (Pol. Sci. 36.1) Mr. Hoag

38.1 Political Theory Fall semester
A study of political ideas and concepts and the major contributions to the explanation of the political organization of society. The material studied includes the European heritage of thought, principal American ideas, and the problems of the 20th century. (Pol. Sci. 11.1 and 11.2) Mr. Nelson

38.2 Political Theory Spring semester
Continuation of 38.1 (Pol. Sci. 38.1) Mr. Nelson

40.1 American Politics and Legislation
The theory of politics; political parties, interest groups, the electoral system and their function in the initiation and control of government policies. (Pol. Sci. 11.1, 11.2.) Mr. Thurber

40.2 American Politics and Legislation Spring semester
Legislative organization and the law-making process, with emphasis on the function of the power groups studied in the first semester. Closely related to current legislative proceedings. (Pol. Sci. 40.1) Mr. Thurber

41.1 United States Constitutional Law Fall semester
An overall examination of American constitutional law, utilizing leading cases and supplementary historical materials. The emphasis will be upon the relationship between political, social, and economic factors of constitutional growth and development. (Pol. Sci. 11.1; 11.2) Open to Juniors and Seniors Mr. Lendt

41.2 Political Behavior Spring semester
A study of the theories and concepts involved in the behavioral approach to politics. The course will include an analysis of a number of empirical and theoretical studies, with particular attention paid to the development of methods and techniques of research illustrated by the study of American politics. (Pol. Sci. 11.1; 11.2) Open to Juniors and Seniors Mr. Lendt

[**42.1 International Politics: Theory**]

[**42.2 International Politics: Theory**]

50.1 and 50.2 Advanced Projects in Research Fall and Spring semesters.
Staff

PSYCHOLOGY

Associate Professor EWELL
Mr. SWIFT
Assistant Professor PROUTY

Required for a major in Psychology: 11.1, 11.2, 25.2, 30.1, 41.1, Independent Study, and the General Examination, and at least three additional one-semester courses in Psychology; Mathematics 11.1, .2, or 12.1, .2, Biology 23.2 and its prerequisites.

The selection of cognate courses will depend upon the student's purposes in majoring in Psychology.

11.1 General Psychology (Introductory Course) Fall semester
A detailed survey of the field of psychology on both the behavioral and biological levels. Emphasis is placed on the scientific study of behavior and on empirical evidence leading to contemporary formulations. The course serves as a foundation for advanced work in psychology and offers an acquaintance with the fundamentals of psychology for students in other fields. Credit for Psychology 11.1 will not be given until Psychology 11.2 has been satisfactorily completed. (Open to Freshmen and Sophomores without permission. Open to Juniors and Seniors with permission.)
STAFF

11.2 General Psychology (Introductory Course) Spring semester
Continuation of 11.1. The final examination in this course will cover the material of Psych. 11.1 and 11.2. (Psych. 11.1)
STAFF

25.2 Human Factors Research Spring semester
The application of principles of psychology to problems arising in industrial, military, and other practical contexts. Emphasis on human engineering and human relations. (Psych. 11.1, 11.2, Math 11 or 12 or permission.) 3 hrs. lecture; lab.—3 credits. Computing machine fee, $6.00
STAFF

28.1 Developmental Psychology Fall semester
A study of human development in terms of the principles and methods of psychology. Particular attention is given to the periods of childhood and adolescence. (Psych. 11.1, .2)
Mr. PROUTY

29.1 Social Psychology Fall semester
Develops a psychological framework for describing social phenomena in terms of material from general psychology. Problems of language, communication, attitudes, and group dynamics are studied in detail. Basic principles are illustrated by reference to many different social phenomena. (Psych. 11.1, .2 and permission) Mr. SWIFT

30.1 Psychophysics and The Sensory Processes Fall semester
A study of the sensory processes with particular emphasis on basic psychophysics. Laboratory work focusses on sensory processes and general problems of designing and reporting psychological experiments. (Psych. 25.2, Math 11 or 12). 3 hrs. lecture; lab.—3 credits. Laboratory fee $6.00
Mr. EWELL

31.2 Experimental Psychology: Learning Spring semester
A consideration of research in the area of learning with respect to method and theoretical interpretation. Topics include Pavlovian conditioning, operant conditioning,

transfer of training, discrimination, and major learning theories. (Psych. 30.1) 3 hrs. lecture; lab.—3 credits. Laboratory fee $5.00 Mr. Prouty

32.2 Experimental Psychology: Perception Spring semester
A study of perception from the molar and behavioral points of view. Emphasis is placed on quantitative, predictive studies. (Psych. 30.1 or permission) 3 hrs. lecture; lab.—3 credits. Laboratory fee $5.00 Mr. Ewell

33.1 Measurement of Human Performance Fall semester
A consideration of various tests and methods for measuring and predicting human behavior. Emphasis is placed on the nature of measurement, the derivation and interpretation of measures, and the use of test results in understanding human behavior. (Psych. 11.1, .2) Mr. Prouty

38.2 Personality Spring emester
Emphasizes the scientific conceptualization of the unique individual personality. Subjects covered include traits, schemata, motives, and systematic motivational approaches to personality. (Psych. 11.1, .2, and permission). Limited to 25 Juniors and Seniors. Mr. Swift

41.1 Physiological Psychology Fall semester
A study of the physiological and anatomical bases of behavior, with especial emphasis on the implications of recent research dealing with central and autonomic events. (Psych. 11.1, .2, and permission). Permission will be granted to students having strong backgrounds in psychology, biology, or chemistry. Mr. Ewell

46.2 Psychopathology Spring semester
A survey of the symptomatology, nosology, and etiology of mental illness from the organic-psychological points of view. Includes special topics; e.g., experimentally and chemically induced disorders, procedures of treatment, and the like. (Psych. 11.1, .2 and permission) Mr. Ewell

50.1 and 50.2 Advanced Study Fall and Spring semesters
A course arranged to meet the needs of students majoring in Psych. (Permission) Staff

SOCIOLOGY-ANTHROPOLOGY

Associate Professor Ofslager
Mr. Haerle
Mr. Schwartz

Required for a major: A minimum of 30 hours in Sociology-Anthropology including Soc. 12.1, 12.2, 23.1, 23.2, 31.1 or 31.2, 40.1, 40.2; Independent Study and the General Examination.

Recommended: Psych. 29.1, 38.1; Pol. Sci. 11.1, 11.2; Am. Lit. 21.1, 21.2, 46.2; Phil. 22.1, 36.2; Biol. 21.1, 23.2; Hist. 36.1, 36.2, 45.1, 45.2.

Cognate courses should be planned with the advisor.

12.1 Introduction to Sociology-Anthropology Fall semester
Introduction to the systematic study of society and culture. The study of the social order and its institutional basis. The application to society of the concepts of socialization, social structure, social organization. It is strongly recommended that this course be taken prior to 12.2. Mr. Haerle, Mr. Schwartz

12.2 Introduction to Sociology-Anthropology Spring semester
Continuation of 12.1. A survey within sociological perspective of the major problem areas of American Society. (Soc. 12.1 or permission). Mr. HAERLE, Mr. SCHWARTZ

23.1 Physical Anthropology Fall semester
Where and when the earliest human beings appeared. How the physical characteristics of Man have evolved. Resemblances and differences between major human types. (Soc. 12.1, 12.2 or permission.) Mr. OFSLAGER

23.2 Cultural Anthropology Spring semester
Continuation of Soc. 23.1. The concept of culture. An intensive analysis and comparison of non-literate cultures. Implications of the data of cultural anthropology for the understanding of our own culture. (Soc. 12.1, 12.2, 23.1) Mr. SCHWARTZ

31.1 Community Fall semester
Analysis and comparison of communities in stable and rapidly changing societies. (Soc. 12.1, 12.2) Mr. SCHWARTZ

31.2 Social Stratification Spring semester
Theories of the origin and function of stratification; relationship of class to selected social and cultural factors; change and mobility in stratification systems. (Soc. 12.1, 12.2) Mr. SCHWARTZ

32.1 Socio-Cultural Change Fall semester
Society and culture viewed in dynamic perspective. Principles of sociocultural change derived mainly from selected studies of acculturation. (Soc. 12.1, 12.2) Offered in alternate years; to be given in 1963–64. Mr. SCHWARTZ

34.1 Majority-minority Group Relations Fall semester
Structural-functional approach to prejudice and discrimination as related to majority-minority relations. (Soc. 12.1, 12.2) Mr. HAERLE

37.2 Public Opinion and Mass Communications Spring semester
The sociological study of mass communications and propaganda with emphasis on their function as instruments of social control. (Soc. 12.1, 12.2 or permission.) Offered in alternate years; to be given in 1963–64. Mr. HAERLE

[**38.2 Work and Society**]
The study of work as a social phenomenon, from the frame of reference of social structure and organization; the study of bureaucracy; assessment of functional relationships between occupations and institutions. (Soc. 12.1, 12.1 or permission) Offered in alternate years; to be given in 1964–65.

40.1 Survey of Social Thought Fall semester
A survey of Man's ideas about the nature of society and of man's relationship to it, with emphasis on the thought of selected important thinkers. The relationship of social thought to the context of its times. (Juniors and Seniors) Mr. OFSLAGER

40.2 Social Theory and Research. Spring semester
Stresses methodological and theoretical materials of general relevance to the fields of anthropology and sociology. This course, required of all sociology majors, is to be correlated with the independent study program. Mr. OFSLAGER

41.2 Marriage and the Family Spring semester
A study of the family as a social institution and of marriage as a medium of social expression. (Juniors and Seniors) Mr. Ofslager, Mr. Haerle

42.1 Personality and Culture Fall semester
Development and modification of the personality in terms of the culture and subcultures in which one grows and functions. Especial emphasis upon materials from non-literate societies. (Soc. 12.1, 12.2) Offered in alternate years; to be given in 1963–64. Mr. Ofslager

43.1 Criminology Fall semester
A study of crime in American society and the factors associated with criminal behavior. Examinations of penalties and treatments. (Juniors and Seniors)
Mr. Haerle

[46.1 Theory and Methods of Social Work]
A course for advanced students interested in, or preparing for, work in social agencies. The study of the aims and work methods of social agencies.
(Soc. 46.1 and permission.)

46.2 Social Problems Spring semester
The case study approach to a selected number of social problems which the community and state have sought to treat and control. (Seniors, Soc. 12.1, 12.2 and permission.) Mr. Ofslager

50.1 and 50.2 Advanced Individual Study Fall and Spring semesters
Majors only, by permission. Staff

TEACHER TRAINING

Assistant Professor Campbell, Director

Program Objectives: The Teacher Training Program at Middlebury is designed to achieve two primary goals: first, to produce teachers who have concentrated on liberal arts courses which Middlebury is best qualified to offer; and second, to provide sufficient professional education credits, (usually 18), to qualify candidates for provisional certification in the states and at the grade levels of their choice. Prospective teachers, therefore, are advised to major in a subject they intend to teach or in one that will strengthen such teaching. *There is no major in Teacher Training or Education at Middlebury.* The professional education credits are obtained by taking courses offered in the Teacher Training Program, and by selecting academic courses in the various departments of the college, courses which qualify for some professional education credits.

Candidates are encouraged to participate in fifth-year programs at Harvard, Yale, Wesleyan, or other universities. The Middlebury program is especially concerned with qualifying students for teacher certification in Vermont. At all times the keyword is flexibility. The plans, backgrounds, and needs of candidates vary so much that reliance is placed on individual programming rather than on any rigid formulas. Such programs are arranged in conferences with the Director. The Teacher Training Program is currently supported by a Ford Foundation Grant.

Procedure: Register with the Director. Such registration may take place at any time during the four years at Middlebury. However, early registration (preferably during the freshman or sophomore years) facilitates programming.

Freshman or Sophomore years: Recommended, Psychology 11.1 and 11.2 (prerequisite for Psychology 28.1 and 33.1). Also History 12.1 and 12.2 (includes material on history and philosophy of education).

Sophomore or Junior years: Recommended, Psychology 28.1 (Developmental Psychology) and Psychology 33.1 (Measurement of Human Performance).

Junior or Senior years: Recommended, Teacher Training 32.1 (Problems and Methods Seminar—Elementary) or 33.1 (Problems and Methods Seminar—Secondary).

Senior year: Recommended, Teacher Training 42.1, 42.2 (Practice Teaching, Elementary) or 43.1, 43.2 (Practice Teaching, Secondary).

Other courses. Middlebury offers a variety of courses which warrant special consideration by prospective teachers. For example, language teachers should take French 41.1 (Language Methods); mathematics teachers, Math 46.1 (Number Concepts). Some states grant professional education credit for Sociology 12 and 23.2. Some states, Connecticut for example, require American History of all teachers (History 22 at Middlebury). The Director is prepared to recommend courses according to individual needs.

[**32.1 Problems and Methods Seminar for Elementary School Teachers.**]
Not to be given in 1963–64.

33.1 Problems and Methods Seminar for Secondary School Teachers.
(Permission.) Fall and Spring semesters
Mr. CAMPBELL

[**42.1 and .2 Practice Teaching—Elementary**]
Not to be given in 1963–64.

43.1 Practice Teaching—Secondary Fall and Spring semesters
(T.T. 33.1 or permission) Mr. CAMPBELL

43.2 Practice Teaching—Secondary Fall and Spring semesters
Usually taken concurrently with T.T. 43.1. Mr. CAMPBELL

Division of the Natural Sciences

Professor John G. Bowker, Chairman

BIOLOGY
CHEMISTRY
GEOLOGY, GEOGRAPHY
MATHEMATICS
PHYSICAL EDUCATION
PHYSICS

BIOLOGY

Professor Hitchcock*
Associate Professor Woodin
Assistant Professor Reynolds
Visiting Assistant Professor Robinson
Dr. Gaunt

Mrs. Munford*
Mr. Christopher
Mr. Panitz

Required for a major: 11, 21.1, 22, 44 and two electives; Chemistry 11.1, 13.1, 23.2; Independent Study and General Examination.

Recommended: Mathematics 11 or 12; 1 year College Physics.

Joint major in Biology and Chemistry required for a major: Biol. 11, 21.1, 44.1 and one elective; Chem. 11.1, 13.1, 15.1, 17.2, 23.2, 19.1 or 37.1, and one other semester course; Mathematics 12; Physics 21; Independent Study (Chemistry first semester, Biology second semester) and the General Examination. Joint majors in Biology and Chemistry must have a reading knowledge of French or German or Russian. This requirement may be met by the completion of the normal second-year college language course or by a reading test set by the language department.

11.1 General Biology Fall semester

An introduction to living organisms, with emphasis on physiological activities. Relationship of organisms to environment; principles of broad biological importance such as reproduction and inheritance; theories of evolution. 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10. No prerequisite. Staff

11.2 General Biology Spring semester

Continuation of 11.1. Same hours, credits and fees as for 11.1. (Biol. 11.1) Staff

20.2 Invertebrate Zoology Spring semester

Evolution of the invertebrate phyla as shown by their morphology, embryology and physiology. Ecology and behavior of certain major taxa. Laboratory emphasis on major taxonomic categories and functional morphology. (Biol. 11.) 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10. Given in alternate years; not to be given in 1964–65. Mr. Gaunt

21.1 Comparative Anatomy of Vertebrates Fall semester

A study of vertebrate structure, adaptation and evolution. Dissection of representative types. (Biol. 11) 3 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee $10. Mr. Robinson

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*On leave, 1963–64.

22.1 Plant Anatomy and Taxonomy Fall semester
A detailed study of cell and tissue structure with emphasis on vascular plants and woody plant taxonomy based on collections made, identified and mounted. (Biol. 11) 3 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee $10. Mr. Woodin

22.2 Plant Morphology and Physiology Spring semester
A comparative survey of structure and evolutionary relationships of the major plant phyla. General physiology of the vascular groups, including radioisotope techniques and individual semester-length research. (Biol. 22.1) 3 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee. $10. Mr. Woodin

23.2 Human Physiology Spring semester
A study of the principal physiological processes of vertebrates including muscle contraction, respiration, metabolism, digestion, circulation and excretion. Emphasis on coordination of body function. (Biol. 11, Chem. 11 or permission.) 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10. Mr. Reynolds

24.2 Comparative Embryology Spring semester
General principles of animal development, with emphasis on vertebrate types. Detailed laboratory study of early development of frog and chick. (Biol. 21.1) 3 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee $10. Mr. Robinson

[34.2 Histology and Histological Techniques]
Microscopic structure of animal cells, tissues and organs correlated with function and development. Standard preparation of tissues for study. Individual problems. (Biol. 21.1; 24.2 recommended.) 2 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee $10. Given in alternate years; to be given 1964–65. Mr. Gaunt

36.1 Principles of General Ecology Fall semester
Relations of plants and animals to environment and to each other. Laboratory work primarily in field. Fundamentals of soil, water, forest and wildlife conservation and management. (11 students by permission, 2 yrs. of Biol. or 1 yr. Biol. and 1 yr. of another science.) 3 hrs. lect., 6 hrs. lab. 4 credits. Laboratory fee $10. Mr. Woodin

37.1 Genetics Fall semester
Principles of heredity. Methods of gene action in controlling development, heredity and evolution. Introduction to bacterial and viral genetics; molecular basis of heredity. (Biol. 11) 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10. Mr. Gaunt

44.1 General and Cellular Physiology Fall semester
Fundamental physiological properties of cells, including physiochemical characteristics, intermediary metabolism, irritability and response, growth and cell division. Laboratory emphasis on techniques of cell physiology. (2 yrs. Biol., Chem. 13.1, 23.2. Seniors or permission.) 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10. Mr. Reynolds

44.2 Comparative Physiology Spring semester
A comparative study of the principal physiological functions of vertebrate and invertebrate animals. Laboratory work will include individual and group problems of an experimental nature. (44.1 Seniors or permission.) 3 hrs. lect., 3 hrs. lab. 4 credits. Laboratory fee $10 and breakage. Mr. Reynolds

50.1 and 50.2 Advanced Study Fall and Spring semesters
For honors students, majors and graduate students in Biology. (Permission.) Fee of $10 per semester if laboratory work. STAFF

55. and 55.2 Research and Thesis Fall and Spring semesters
Open to properly qualified students. Required for all candidates for the Master's degree. Laboratory fee $10. STAFF

CHEMISTRY

Professor HARNEST
Associate Professor MOYER
Associate Professor ROBERTS
Associate Professor POOL
Assistant Professor GLEASON

Required for a Major: 11.1*, 13.1, 15.1, 17.2, 19.1, 23.2, 37.1 and three other semester courses in the department; Mathematics 12; Independent Study and the General Examination.

Required for a Certified Major: Students who wish to be certified by the American Chemical Society may complete a major in Chemistry with the following courses: 11.1*, 13.1, 15.1, 17.2, 19.1, 23.2, 35.2, 37.1 and three other semester courses in the department; Independent Study and the General Examination; Mathematics 12 and 21; Physics 21; a reading knowledge of German is required. German 22 is recommended. The language requirement may be met by completion of the normal second-year college course or by a reading test. The certified major is designed to qualify a student for advanced work in graduate school or for positions in chemical industry.

Joint Major in Biology and Chemistry. Required for a Major: Biology 11, 21.1, 44.1, and one elective; Chemistry 11.1*, 13.1, 15.1, 17.2, 23.2, 19.1 or 37.1 and one other semester course; Mathematics 12; Physics 21; Independent Study (Chemistry first semester and Biology second semester) and the General Examination. Joint majors in Chemistry and Biology must have a reading knowledge of French, German, or Russian. This requirement may be met by the completion of the normal second-year college language course, or by a reading test set by the Language Department.

The Chemistry department is accredited by the Committee on the Professional Training of Chemists of the American Chemical Society. The certified major provides a thorough training in the fundamentals of Chemistry and its relation to other scientific fields, medicine, engineering, and related subjects. Students completing this program satisfactorily will be adequately qualified for advanced work in graduate schools or positions in chemical industry. Majors should have their programs approved by the Chairman of the department early in their college course if they wish to be accredited by the Society.

A deposit fee to cover cost of broken apparatus is charged in each laboratory course, to be paid to the Treasurer at the beginning of each term.

11.1 Fundamentals of Chemistry Fall semester
Fundamental principles of Chemistry. Atomic theory and atomic structure, chemical bonds, stoichiometry, kinetic theory, and the states of matter. Problem drill, conferences. Students with adequate secondary school preparation are encouraged to consult the department for permission to elect Chemistry 13.1, 15.1, 17.2, or 19.1

*Chemistry 11.1 is the normal introductory course in Chemistry. However, students may qualify for permission to omit 11.1, and begin their studies in Chemistry with 13.1, 15.1, 19.1 or 1.72. Consult the Chairman of the department.

in place of this course. Two sections. 3 hrs. lect., 4 hrs. lab.—4 credits. Laboratory fee, $10 and breakage.

Mr. Harnest, Mr. Moyer, Mr. Gleason

13.1 Organic Chemistry I Fall and Spring semesters

Chemistry of the carbon compounds, both aliphatic and aromatic. Electronic and structural theory, organic synthesis, analysis, and functional behavior of important classes of compounds. (Chem. 11.1 or permission) 3 hrs. lect., 6 hrs. lab.—4 credits. Laboratory fee, $12 and breakage. Mr. Harnest, Mr. Gleason

15.1 Physical Chemistry I Fall and Spring semesters

Introduction to Physical Chemistry and physicochemical measurements. Properties of ideal and real gases; structure and properties of liquids and solids. Properties of solutions; phase equilibria. Colloids. Gaseous chemical equilibria. (Chem. 11.1, Math 12 or permission) 3 hrs. lect., 4 hrs. lab., 1 hr. conf.—4 credits. Laboratory fee, $10 and breakage. Mr. Roberts

17.2 Analytical Chemistry I Spring semester

Extensive treatment of mass action theory (ionic equilibrium). Theory of titrimetric analysis. Laboratory work is mainly titrimetric with some gravimetric methods. (Chem. 11.1 or permission) 3 hrs. lect., 6 hrs. lab.—4 credits. Laboratory fee, $10 and breakage. Mr. Pool

19.1 Systematic Inorganic Chemistry Fall and Spring semesters

The systematic study of the elements based on their periodic classification and the structure of their compounds. Sources and methods of isolation of the elements. Methods of synthesis and physical and chemical properties of important types of inorganic compounds. (Chem. 11.1 or permission) 3 hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $10 and breakage. Mr. Moyer

23.2 Organic Chemistry II Fall and Spring semesters

Continuation of 13.1. Same hours, credits, and fees as for 13.1 (Chem. 13.1).

35.2 Physical Chemistry II Spring semester

Introduction to first, second, and third laws of thermodynamics. Thermochemistry. Free energy and chemical equilibrium: electromotive force. Chemical kinetics and photochemistry. (Chem. 15.1, 17.2, 19.1, 23.2; Physics 21.1, 21.2; Math 21.1, 21.2) 3 hrs. lect., 4 hrs. lab.—4 credits. Laboratory fee, $10 and breakage. Mr. Roberts

37.1 Analytical Chemistry II—Chemical Separations Fall semester

Theories of analytical chemistry (qualitative and quantitative). Laboratory time is divided between inorganic qualitative analysis and gravimetric analysis. (Chem. 17.2) 3 hrs. lect., 6 hrs. lab.—4 credits. Laboratory fee, $10 and breakage. Mr. Pool

[**42.1 Biochemistry**]

The study of the chemistry of carbohydrates. Digestion, absorption, and metabolism of the carbohydrates, and the enzyme systems, vitamins, and harmones involved in these processes. (Chem. 15.1, 17.2, 23.2; Biology 11.2 is recommended) 3 hrs. lect.—3 credits. Offered in alternate years; to be given in 1964–65.

42.2 Biochemistry Spring semester

The study of the chemistry of lipids and proteins. Digestion, absorption, and metabolism of lipids and proteins, and the enzyme systems, vitamins, and hormones involved in these processes. (Chem. 15.1, 17.2, 23.2; Biology 11.2 is recommended) 3 hrs. lect—3 credits. Offered in alternate years; not to be given in 1964–65.

Mr. Moyer

43.1 Organic Chemistry III—Qualitative Organic Analysis Fall semester

Characterizations of various types of organic compounds. Practice in qualitative analysis, separation of mixtures, and infrared and ultraviolet analysis. Relation of physical properties and chemical constitution, functionalism and structure, analytical methods and syntheses. (Chem. 17.2, 23.2) 1 hr. lect., 6 hrs. lab.—3 credits. Laboratory fee, $12 and breakage. Mr. Harnest

[**44.1 Advanced Organic Chemistry**]

An introduction to physical organic chemistry considering dipole moments, resonance, electronic theory, bond energies, hyperconjugation, polar reaction mechanisms, the relation of structure to reactivity (the Hammett equation), general and specific acid and base catalysis. (Chem. 15.1, 23.2; Physics 21; Math 12 or permission) 3 hrs. lect.—3 credits. Offered in alternate years; to be given in 1964–65.

44.2 Advanced Organic Chemistry Spring semester

A study of the methods of advanced organic chemistry including name reactions, rearrangements, structure determination of naturally occurring substances, syntheses involving active methylene compounds, peptide and steroid syntheses. (Chem. 23.2) 3 hrs. lect.—3 credits. Offered in alternate years; not to be given in 1964–65.

Mr. Gleason

45.1 Physical Chemistry III Fall semester

Nuclear chemistry. Atomic structure and theories of chemical bonding based on wave mechanics. Physical properties of matter and molecular structure. Statistical mechanics. (Chem. 15.1, 19.1, 23.2; Physics 21; Math 21) 3 hrs. lect.—3 credits

Mr. Roberts

47.2 Analytical Chemistry III—Instrumental Analysis Spring semester

Theories of separation and determination by instrumental methods. Laboratory work in instrumental analysis. (Chem. 37.1) 2 hrs. lect., 3 hrs. lab.—3 credits. Laboratory fee, $10 and breakage. Mr. Pool

49.1 Advanced Inorganic Chemistry Fall semester

Special topics in inorganic chemistry (Chem. 15.1, 19.1, 23.2; Physics 21.2) 3 hrs. lect.—3 credits. Mr. Pool

55.1 and 55.2 Research Fall and Spring semesters

Open to properly qualified students. Required of all candidates for the Master's degree. Permission. Laboratory fee $12 per semester and breakage. Staff

a. Analytical Chemistry
b. Inorganic Chemistry
c. Physical Chemistry
d. Organic and Biochemistry

Independent Study Fall and Spring semesters

Required of all seniors. Breakage. Staff

GEOLOGY AND GEOGRAPHY

Professor Schmidt
Professor Illick*
Associate Professor Malmström
Associate Professor Baldwin

Geology

Required for a Major: 11.1, 11.2, 22.1, 22.2, 24.2, 30.1, 32.2; Independent study and the General Examination. Mathematics 12, Chemistry 11.1, and a semester course in Geography.

Recommended: 50.1. Students planning on graduate school should take additional courses in Mathematics, Chemistry, Physics, and Biology, and should attend a Summer Field Camp in geology; reading knowledge of German, and French or Russian also recommended.

11.1 Physical Geology Fall semester
Nature and results of geologic processes, at the surface and at depth, in forming minerals, rocks, and structures. Field trips; identification of minerals and rocks; topographic maps and geologic processes. 3 hrs. lecture, 3 hrs. lab., and field trips. 4 credits. Field trip fee $6. (Limited to 100 students.) Mr. Schmidt, Mr. Baldwin

11.2 Historical Geology Spring semester
Physical changes in the surface of the earth through geologic time; the rise and evolution of organic forms as disclosed by fossils. Fossils; descriptive geometry and geologic maps; geology of selected areas; field trips. (Geology 11.1.) 3 hrs. lecture, 3 hrs. lab., and field trips. 4 credits. Field trip fee $6. (Limited to 100 students.) Mr. Schmidt, Mr. Baldwin

22.1 Mineralogy of Non-silicate Minerals Fall semester
Crystallography; physical properties of non-silicate minerals; formation of mineral deposits. Identification of minerals in hand specimen and by chemical methods. (Geology 11.1 or Chemistry 11.1; may be taken concurrently.) 3 hrs. lecture, 3 hrs. lab. 4 credits. Laboratory fee $8. Mr. Schmidt

22.2 Mineralogy of Silicate Minerals Spring semester
Theory of light in anisotropic minerals; crystal chemistry. Identification of minerals in hand specimen and by optical methods. Same hours, credits, and fees as for 22.1 (Geology 22.1) Mr. Baldwin

24.2 Invertebrate Paleontology Spring semester
Terminology, classification, and evolution of main groups of invertebrate fossils; their use in correlating and interpreting environments of strata. Field trips; description and identification of fossils. (Permission.) 3 hrs. lecture, 3 hrs. lab., and field trips. 4 credits. Laboratory fee $5. Mr. Schmidt

[30.1 Petrology]
Origin, composition, texture, and classification of igneous, sedimentary, and metamorphic rocks. Description of hand specimens; study of origin in thin section.

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*Chairman.

(Geology 22.) 3 hrs. lecture, 3 hrs. lab. 4 credits. Laboratory fee $6. (Given in alternate years: to be given in 1964–65.)

32.2 Structural Geology Spring semester
Mohr's circle; terminology, field characteristics, and origin of structural features of sedimentary, igneous, and metamorphic rocks. Descriptive geometry and use of stereonet; interpretation of geologic maps; field trips. (Geology 11.1 and permission.) 3 hrs. lecture, 3 hrs. lab., and field work. 4 credits. Laboratory fee. $3.
Mr. BALDWIN

50.1 Advanced Study
Field project and report for senior majors in Geology; special projects for non-majors. (Permission.)

GEOGRAPHY

Required for a Major: 10.1 and .2, 25.1, and .2, 40.1 and, 2, 50.1 and one regional course; Independent Study, involving research projects, field trips, and seminars; and the General Examination.

Cognate courses for a major in Geography range over a broad field and should be selected from other departments according to one's interest in Geography, and with the approval of the advisor. Courses in the social sciences are especially recommended.

Two years of a foreign language and a summer field camp are recommended for those applying to graduate school.

10.1 World Regional Geography Fall semester
A survey of the physical and cultural factors which influence the distribution of man and his activities on the surface of the earth. Regional differences will be analyzed in relation to various aspects of the natural environment and human affairs. Geog. 10.2 must be passed before credit for 10.1 is given. STAFF

10.2 World Regional Geography Spring Semester
Continuation of 10.1 (10.2 cannot precede 10.1) STAFF

25.1 Physical Geography Fall Semester
A systematic examination of the elements of the physical environment. Landforms, climate, soils, vegetation, minerals and water resources will be studied by means of field trips, maps and photo-interpretation. 3 hrs. lect., 3 hrs. lab. 4 credits. Field Trip fee, $5. (Geogr. 10) Mr. ILLICK

25.2 Economic Geography Spring semester
An analysis of the origins, nature, and distribution of Man's economic activities over the world. The evolution of subsistence, commercial, and planned economies will be studied in a regional context. Field trips. (Geog. 10)
Field Trip Fee, $3. Mr. MALMSTRÖM

[30.1 Geography of Africa]
A study of the emerging nations of Africa and the special role they play in world economic and political affairs. The geographic bases of their nationhood, their

problems, and outlook for the future will be assessed. (Geog. 10) Alternates with Geog. 36.1; to be given in 1964–65.

35.1 Geography of Latin America Fall semester
A consideration of the individual countries of Middle and South America, their resources, problems, and prospects. Special attention is given to their relations with the United States and to their significance in world affairs. (Geog. 10) Alternates with Geog. 37.1; not to be given in 1964–65. Mr. Malmström

35.2 Geography of Europe Spring semester
A study of the economic, social, and political patterns of present-day Europe. Emphasis will be placed on the distinctive personalities of the individual countries and on their role in regional and global affairs. (Geog. 10) Mr. Malmström

36.1 Geography of Asia Fall semester
A systematic examination of the regions and nations of Asia (excluding the Soviet Union), with special emphasis on their problems and potentialities as they relate to world economic and political patterns. (Geog. 10) Alternates with Geog. 30.1; not to be given in 1964–65. Mr. Illick

36.2 Geography of Anglo-America Spring semester
A regional analysis of the United States and Canada, giving special attention to the physical, historical, and economic factors which contribute to areal differentiation. (Geog. 10) Mr. Illick

[37.1 Geography of the Soviet Union]
An intensive systematic and regional analysis of the world's largest country. The problems and potentialities of the Soviet Union will be critically evaluated in terms of the challenge it poses for world leadership. (Geog. 10) Alternates with Geog. 35.1; to be given in 1964–65.

40.1 Political Geography Fall semester
The study of the state as a geographic phenomenon, with emphasis on the spatial, cultural, and economic factors that influence its emergence, growth, and relationships with other states. The present world situation will be analyzed in terms of geopolitical principles. (Geog. 10) Mr. Malmström

40.2 Cartography Spring semester
An introduction to the compilation, design, and interpretation of maps. Training is given in the techniques of compiling maps from field surveys, aerial photographs, and various library and statistical sources and in the evaluation and construction of map projections; also graphic representation in the form of diagrams and models. Field trips. Two hours of lecture and one laboratory a week. Fee $5. (Limited to 20 students.) (Geog. 10) Mr. Illick

50.1 Advanced Study Fall semester
A course arranged to fulfill the research needs of students majoring in Geography.
Mr. Illick, Mr. Malmström

MATHEMATICS

Professor Ballou
Professor Bowker
Mr. Bielli
Mr. Peterson

Mr. Dickson

Required for a major: 12.1, .2, 21.1, .2, 34.1, .2, 43.1, .2, one other course in the Department or Physics 47.1, .2; Physics 21.1, .2; Independent Study, and the General Examination. The selection of cognate courses will depend upon the student's purpose in majoring in mathematics.

11.1 Principles of Mathematics Fall semester
Introduction to set theory and the structure of the number system, relations and functions, properties of the elementary algebraic, trigonometric, exponential and logarithmic functions. Designed for students with only three years of secondary school preparation; satisfies minimum requirements for those using mathematics in the social and biological sciences. Must be followed by Mathematics 12 before Mathematics 21 may be taken. Staff

11.2 Principles of Mathematics Spring semester
Continuation of 11.1. An introduction to calculus, analytic geometry, curve sketching, solution of equations, probability, and elementary statistics. (Math. 11.1 or permission.) Staff

12.1 Elementary Mathematical Analysis Fall semester
Topics from analytic geometry through the conic sections and an introduction to the differential calculus of algebraic functions with applications. Designed for students with four years of secondary school mathematics; the freshman course that should be taken by those interested in further mathematics or the physical sciences. Staff

12.2 Mathematical Analysis—Calculus I Spring semester
Continuation of 12.1. The indefinite and definite integral with geometrical applications, the calculus of the elementary transcendental functions, determinants, polar coordinates. (Math. 12.1) Staff

21.1 Mathematical Analysis—Calculus II Fall semester
Techniques of integration, application of integration to physical problems, hyperbolic functions, curvature and curvilinear motion, introductory vector analysis and applications. (Math. 12.2.) Mr. Ballou

21.2 Mathematical Analysis—Calculus III Spring semester
The calculus of functions of more than one variable and an introduction to infinite series. Partial derivatives, multiple integrals, and their applications; Maclaurin and Taylor series. (Math. 21.1). Mr. Ballou

[**22.2 Mathematics of Finance**]
Annuities certain and life annuities. Offered in alternate years, to be given in 1964-65.

34.1 Differential Equations Fall semester
A treatment of ordinary differential equations including the types most frequently

encountered in scientific applications. First and second order equations, linear equations with constant coefficients, systems of equations, Laplace transforms, approximation methods of solution. (Math. 21.2.) Mr. Peterson

34.2 Modern Linear Algebra Spring semester
Topics from modern algebra including the algebra of matrices, determinants, rank and equivalence of matrices, linear dependence, systems of linear equations, vector spaces and linear transformations. (Math. 21.2.) Mr. Peterson

35.1 Statistical Method Fall semester
The fundamentals of statistical analysis. The organization and interpretation of statistical data, frequency distributions, measures of central tendency, moments of the distribution, linear trends, linear correlation. (Math. 11.2 or 12.2 or permission.) Calculating machine fee, $6.00. (No student who takes Math. 35.1 may also take Econ. 26.1 for credit.) Mr. Peterson

35.2 Mathematical Statistics Spring semester
The use of mathematical concepts by statisticians in the study and interpretation of data. Systems of frequency curves and moments, theory of large and small sampling, simple, partial, and multiple correlation, measures of reliability, analysis of variance. (Math. 12.2 and 35.1.) Offered in alternate years, not to be given in 1964–65. Calculating machine fee, $6.00. Mr. Peterson

38.1 Introduction to Digital Computers Fall semester
The organization of electronic digital computers; programming in Fortran and in symbolic language for the IBM 1620 and 7090; applications in numerical analysis. Fee, $20. (Math. 21.2 and permission. Limited to 20 students.) Mr. Ballou

43.1 Advanced Calculus I Fall semester
Further topics in the calculus including fundamental concepts of real function theory, divergence and curl, line and surface integrals, Green's theorem. (Math. 34.2. or permission) Mr. Bielli

43.2 Advanced Calculus II Spring semester
Continuation of 43.1. The Stieltjes integral, infinite series, power series, improper integrals, Fourier series. (Math. 43.1.) Mr. Bielli

[46.1 Survey of Mathematics]

50.1 and 50.2 Advanced Study Fall and spring semesters
Individual study for qualified students in more advanced topics in algebra, real or complex analysis, topology. Particularly adapted for those who enter with advanced standing. (Permission.) Staff

Independent Study. The required program of Independent Study will include the development of the number system, both historically and logically; selected topics from modern algebra and number theory; the foundations of geometry; selected topics from projective geometry; readings in the history of mathematics.

PHYSICAL EDUCATION (MEN)

Professor Kelly
Professor Nelson
Assistant Professor Sheehan
Assistant Professor Mackey
Assistant Professor Morrone
Mr. Forbes

Each man is given a yearly medical examination and periodic check-ups are made when necessary.

All physically fit freshmen and sophomores are required to participate in organized activities at least two periods a week. Four terms of physical education are required for graduation. No academic credit is given for 11.1, 11.2, 21.1, or 21.2.

11.1 Physical Training Fall semester
Calisthenics, group games, athletics. Emphasis on development of agility, strength and endurance. Physical Tests. Required of freshmen. Staff

11.2 Physical Training Spring semester
Continuation of 11.1. Required of freshmen. Staff

21.1 Physical Training Fall semester
Individual exercise. Varsity and intramural sports. Class work. Required of Sophomores. Staff

21.2 Physical Training Spring semester
Continuation of 12.1. Required of Sophomores. Staff

[33.1 Safety in Physical Education]
Safety factors; schools, communities, industry, highways, physical education and recreation. Liabilities, defenses, insurances. Offered in alternate years; to be given in 1964–1965. (Permission)

[33.2 Minor Sport]
Fundamentals, rules and techniques in running a complete High School sports program. Schedules, officials, tournaments. Offered in alternate years; to be given in 1964–65. (Permission)

34.1 Methods and Principles
Comparison of U. S. physical education with training in other countries. Calisthentics, combative exercises. Offered in alternate years; not to be given in 1964–65. (Permission) Mr. Kelly

34.2 Organization of Play
The world history of physical education with emphasis on the influence of climate, religion, and the military. Physical education in the U. S. Mass athletics; youth fitness. Games of low organization. Offered in alternate years; not to be given in 1964–65. (Permission) Mr. Kelly

PHYSICAL EDUCATION (WOMEN)

Associate Professor Lick
Assistant Professor Towne
Miss Young

Physical Education 15.1, 15.2, 25.1, 25.2 are required for graduation but carry no academic credit. A yearly medical examination is required of each woman participating in departmental programs. All women students are required to buy the standard gym outfit, costing approximately $15.

15.1 Physical Education Fall semester
Elective program in seasonal sports, swimming, conditioning. body mechanics, and dance. Required of Freshmen. Staff

15.2 Physical Education Spring Semester
Elective program in seasonal sports, swimming, conditioning, body mechanics, and dance. Required of Freshmen. Staff

25.1 Physical Education Fall semester
Elective program in seasonal sports, swimming, conditioning, body mechanics, and dance. Required of Sophomores. Staff

25.2 Physical Education Spring semester
Elective program in seasonal sports, swimming, conditioning, body mechanics, and dance. Required of Sophomores. Staff

PHYSICS

Professor Wissler
Visiting Professor Bockstahler
Associate Professor Chih

Mr. Dickson

Required for a Major: 21.1, 21.2, 31.1, 32.2, 34.1, 42.2, 47.1, 47.2; Independent Study, and the General Examination; Chemistry—two semesters. Mathematics 12, 21, 34.1.

11.1 Introductory General Physics Fall semester
A general course on fundamental principles designed primarily for those students who are not intending to major in science. Some topics from the usual course in general physics may be omitted.—3 hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $5. Mr. Bockstahler

11.2 Introductory General Physics Spring semester
Continuation of 11.1 (Physics 11.1) Hours, credits, fees same as for 11.1.
Mr. Bockstahler

21.1 General Physics Fall semester
Introduction to fundamental principles, designed for students intending to major in Physics or to continue work in other scientific fields. (Math. 12, or permission.) 3 hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $5. Mr. Wissler, Mr. Dickson

21.2 General Physics Spring semester
Continuation of 21.1. (Physics 21.1.) Hours, credits, and fee same as for 21.1.
Mr. Wissler. Mr. Dickson

31.1 Light Fall semester

Advanced course for those wishing more knowledge than can be obtained from GENERAL PHYSICS. Laws of reflection and of refraction with their applications; the wave theory of light; absorption, dispersion, interference, diffraction, and polarization. (Physics 21.2; Math. 21.2, and permission.) 3 hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $5. Mr. WISSLER

32.2 Electricity and Magnetism Spring semester

Approximately seventy percent of field theory and thirty percent of circuit analysis. Vector presentation is employed almost exclusively in the field theory. In circuit analysis, Laplace transforms are used. (Physics 21.2; Math, 21 and permission.) 3hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $5. Mr. BOCKSTAHLER

34.1 Modern Physics Fall semester

Selected topics from atomic physics, quantum mechanics, nuclear physics, and molecular and solid state physics. A brief review of the special theory of relativity is given at the beginning to obtain relativistic relations used in the course. A number of selected experiments will be performed by students in the laboratory. (Physics 21.2; Math. 21.2 and permission.) 3 hrs. lect., 3 hrs. lab.—4 credits. Laboratory fee, $5. Mr. BOCKSTAHLER

42.2 Astronomy Spring semester

The celestial sphere; astronomical instruments; determination of latitude, longitude, and time; the earth as an astronomical body; the moon's motions and physical characteristics; the sun's physical characteristics; revelations of the spectroscope; eclipses; planets, comets, stars, and nebulae. The College Observatory is used for observational work. (Physics 11.2, or 21.2.) 3 hrs. lect., 3 hrs. lab.—3 credits. Laboratory fee, $5. Mr. WISSLER

47.1 Analytical Mechanics—Statics Fall semester

Statics of particles, rigid bodies, and deformable bodies. Elements of vector analysis are introduced. (Physics 21.2; Math. 21.2 and permission.) Mr. BOCKSTAHLER

47.2 Analytical Mechanics—Dynamics Spring semester

Kinematics and dynamics in inertial and accelerated systems of coordinates. Dynamics of particles and rigid bodies; space mechanics. A brief introduction to the generalized coordinates of Lagrange and Hamilton. (Physics 47.1, Math. 34.1 and permission.) Mr. BOCKSTAHLER

The Department of Military Science

Professor of Military Science (PMS)
Lt. Col. Richard H. Maeder, Infantry, U. S. Army

Assistant Professors of Military Science
Major George H. Patrick III, Infantry, U. S. Army
Captain Richard A. Burr, Artillery, U. S. Army
Captain Charles P. Spalding, Infantry, U. S. Army
Captain Richard E. Powell, Artillery, U. S. Army

Assistant Instructors in Military Science
Sergeant First Class Kenneth E. McCreary
Sergeant First Class Forrest Baldwin, Jr. Staff Sergeant Walter A. McGuire

The objective of a senior ROTC unit, organized under the provisions of the National Defense Act of 1916 and amendments thereto, is to qualify students for a commission in the Regular Army and the Army Reserve in assigned branches of the Army. A two-year basic and a two-year advanced course are offered.

The Basic Course

A two-year course is required of all qualified male students except the following:

a. Veterans
   (1) A student who has served on active duty in the Armed Forces for six months will be excused from the Freshman Basic Course.
   (2) A student who has served on active duty in the Armed Forces for one year will be excused from the entire Basic Course.
b. Former ROTC students
   (1) A student who has successfully completed three or more years of the Junior ROTC program at an accredited ROTC institution will be admitted to the Sophomore Basic Course upon presentation of a military training certificate.
   (2) A student who has successfully completed the first year of the ROTC Basic Course at another accredited ROTC institution will be admitted to Sophomore Basic Course.
c. Transfers from other institutions into the Junior year.
d. Non-citizens.
e. Students exempt through the discretion of the President of the College and the Professor of Military Science for appropriate reasons.

The class meets three periods each week, with a minimum total of 90 hours in each academic year. Uniforms, arms, and equipment are furnished by the Department of the Army at no cost to the student.

11.1 and 11.2 Freshman Basic (Military Science 1)
Organization of the Army and ROTC; Role of the Army and National Security; Historical survey of the evolution of principles and fundamentals of modern warfare; Military doctrine and application; School of the soldier and exercise of command. Two hours of class and one hour of Leadership Laboratory. One credit per semester.

21.1 and 21.2 Sophomore Basic (Military Science II)
An appraisal of military techniques by examining selected American military operations; An Introduction to the principles of map and aerial photograph reading and the fundamentals of small unit tactics; School of the soldier and exercise of command. Two hours of class and one hour of Leadership Laboratory. One credit per semester. (MS 11.1 and 11.2 or equivalent service credit).

The Advanced Course

This is an elective two-year course and carries three hours each semester or twelve hours for the four semesters. All four semesters must be successfully completed before credits are awarded except for special cases which will be ruled on by proper college officials. Members of the advanced course are selected by the President of the College and the PMS from the students in the sophomore class who apply. Draft deferment will be authorized for those who qualify.

Students enrolled in this course will receive a daily subsistence allowance not to exceed the value of the garrison ration for the period that classes are scheduled. This subsistence allowance is paid monthly and is established each fiscal year. During recent years it has averaged $27.00 per month. The class meets five periods per week with a minumum of one hundred fifty hours per academic year. Each unexcused absence causes a forfeiture of two days pay or approximately $1.80.

Advanced Course students wear a regulation Army Officer uniform which is retained by the student upon his graduation. The Government pays $100.00 towards the cost of the uniform and the remaining amount of approximately $35.00 is paid by the student.

Attendance at one summer camp of six weeks duration is mandatory. During such attendance the student is paid at the pay scale of a private in the Army. Mileage at the rate of five cents a mile is paid from home to camp and return. Students will attend camp between the junior and senior academic years, but deferment from the junior to the senior year may be made, for cogent reason, when approved by the Professor of Military Science and the Commanding General, First Army.

On successful completion of the course, the student is commissioned as a Second Lieutenant, U.S. Army Reserve. Outstanding military students are eligible for direct commission in the Regular Army upon graduation. The ROTC student is given a general military science course which does not emphasize any one branch or service. Prior to commissioning, assignment to a branch will be made based upon the needs of the Service and the individual's desires and capabilities. Training is directed primarily toward a commission in one of the combat arms—Infantry, Artillery, Armor, Signal Corps, or Engineer Corps. Students whose academic program has particularly qualified them may be offered a commission in one of the technical services—Chemical Corps, Ordance, Finance, and others.

Students who enroll in the Advanced Course are required to complete both years, and when tendered a commission, are required to accept it, as a prerequisite for graduation from the College.

31.1 and 31.2 First Year Advanced Course (Military Science III)
Leadership; Military Teaching Methods; Organization, function, and mission of

the Arms and Services; Intermediate Tactics and Communications; School of the soldier and exercise of command; Research into the military application of the student's major field of planned study. Four hours of class, one hour of Leadership Laboratory. Three credits per semester. (MS 21.1 and 21.2 or equivalent service credit).

41.1 and 41.2 Second Year Advanced Course (Military Science IV) Logistics; Operations; Advanced Tactics; Military Administration; Military Law; Personnel Management; Service Orientation; School of the soldier and exercise of command. Four hours of class, one hour of Leadership Laboratory. Three credits per semester. (MS 31.1 and 31.2).